Journal

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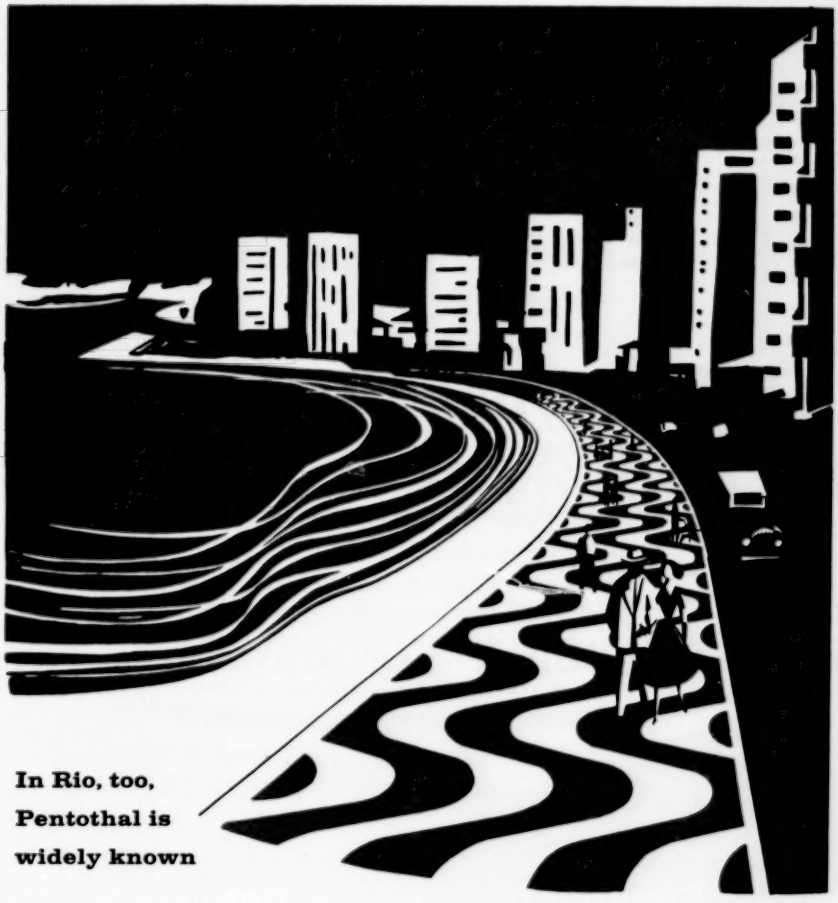

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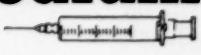

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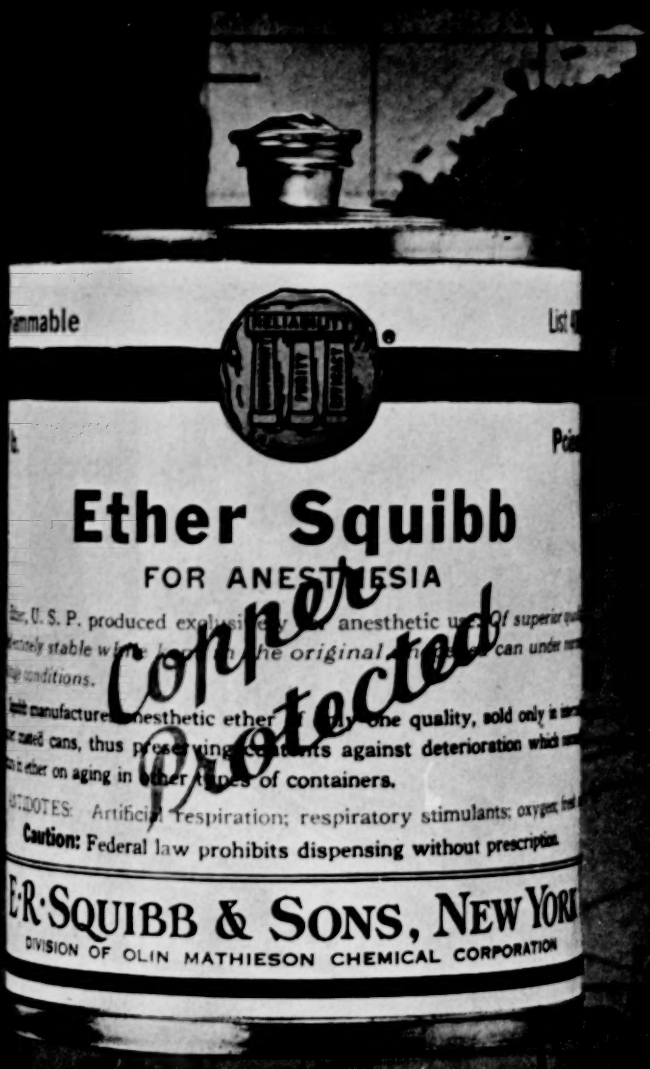
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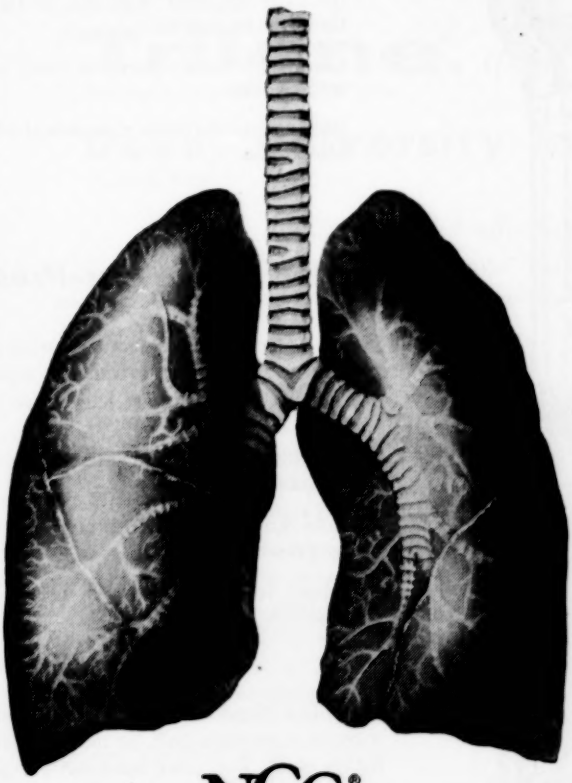

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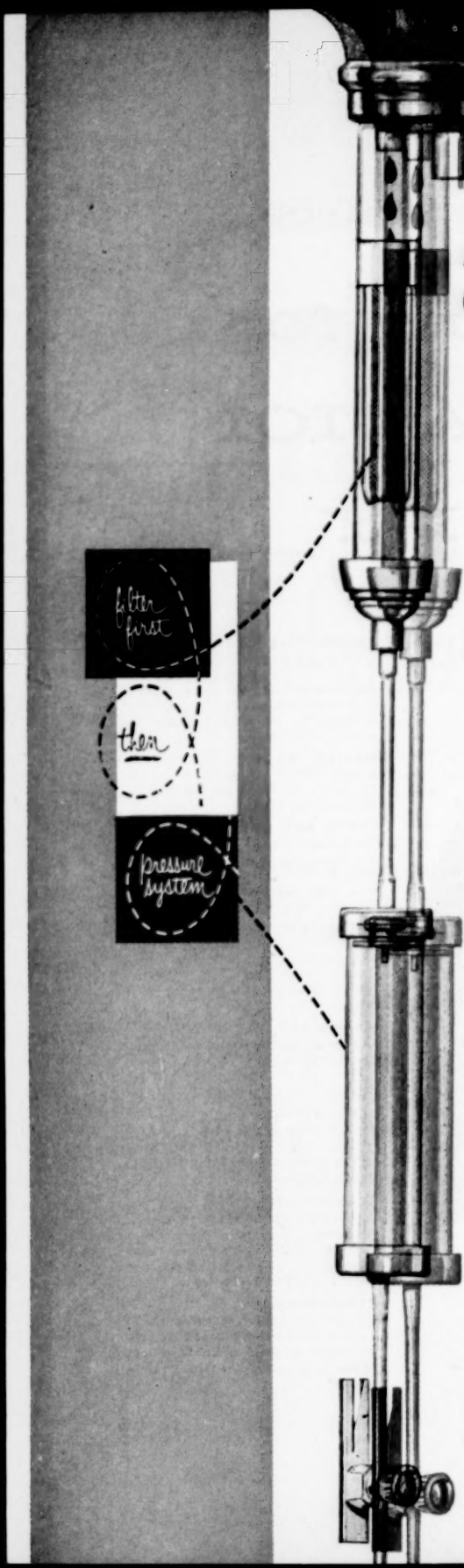

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"It's Human Relations that Count"

David B. Allman, M.D.*
Atlantic City, New Jersey

Few men or women ever have the opportunity afforded me here today: To speak in absentia.

In the last 15 months since I became President-Elect and then President of the American Medical Association I have been called upon to give addresses, orations, lectures, and salutations. But all of these assignments required my presence. Consequently, my remarks were supposed to be short, witty, profound and/or complimentary.

Today I do not have to follow any "good speech" script. I can toss it out the window and talk for hours without being humorous, learned or flattering. Being several thousand miles away in Istanbul, Turkey, I am in no danger.

However, I value the friendship of Dr. Kump and my many good nurse-anesthetist co-workers, and consequently I do not wish to have you listen to a talkathon on my part. Therefore, I want to guarantee at the outset that my paper will not put you of all people to sleep!

Anyone who has been a surgeon as long as I have knows the importance of good nurse anesthetists. In my 35 years of surgical work I have been assisted by the best in your profession. It is for this reason, therefore, that I deeply regret I cannot be with the American Association of Nurse Anesthetists today.

I hope you will excuse my absence, but I want you to know that I hold each of you and your work in the highest esteem.

Like physicians, you are in the great battle against disease and illness. With physicians and other allied medical personnel, you are fighting pain and sickness, two important foes of human happiness. It should be a supreme satisfaction to you—as it is to me—to be a contributor to the well-being of humanity. . .to be a reliever of pain and suffering. . .and to be an active opponent of an enemy of human happiness.

As a great physician, Sir William Osler, once said: "We are here not to get all we can out of life for ourselves, but to try to make the lives of others happier."

There is no greater goal in life for the physician or the nurse anesthetist. Unfortunately, you know a few of your colleagues who prefer to get all they can out of life for themselves. I know a few in my profession, too.

These persons, however, are not among the dedicated majority in medicine because they place themselves before the patient. But I ask you: How can any of us think about

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*President, American Medical Association.
Presented at the Annual Meeting of the American Association of Nurse Anesthhetists, Atlantic City, New Jersey, September 30, 1957.
Read for the author by Dr. Albert C. Kump, President, New Jersey Medical Association.

personal gain when a patient's comfort, safety, health, future and even life itself are our responsibility?

Do we realize the almost divine nature of this responsibility? If we do not, we certainly should begin to realize it.

To most laymen, your responsibilities and mine appear almost to be not of this earth. We are considered to be above normal frailties. Therefore, we cannot err. And we'd better not, either, as far as the patient is concerned.

Therefore, when I see worried parents, anxious sons and daughters, or concerned relatives, I like them to know that we in the operating room are human. I also want them to know that the operating team is as skilled and as well-trained as any champion team ever was.

Just as an athlete has spent weeks of extensive training and practice and the team has worked hard for additional weeks as a unit, so each man and woman in the operating room has spent years, not weeks, preparing for the opportunity to serve the patient in a championship manner. Like first-stringers on an athletic team, the members of the operating team have demonstrated that they are well qualified and are most responsible and capable.

This analogy can be continued further. For example, after an athletic contest is in the record books, the first-string team doesn't sit back and rest on its initial laurels. Between games, the wise first-stringer works to improve his abilities by ever-more vigorous training, study and practice. He knows that unless he shows the constant urge and drive to improve, he soon may become a second or a third-stringer.

It is the same way in our surgical teams.

Between operations, wise nurse anesthetists and physicians do not neglect their studies. They do not want to be replaced on the surgical team because they have fallen behind the pace of medical science.

In medicine, there also is more to the idea of being the best possible nurse anesthetist or surgeon. We in medicine have, to a unique degree, an obligation to perform flawlessly and to improve our skills constantly. It is an obligation that we assumed when we entered medicine and one which we dare not put down as long as we are in the profession.

While I realize that we are not really above human frailties and that we really do make mistakes at times, I do believe that we must strive *not to err*. That is a large order, indeed, but we as physicians and nurse anesthetists cannot pursue any lesser goal.

None of us, I realize, is likely to attain the perfect performance record during his career, but can our life's work be the least bit gratifying if we do not shoot for this seemingly impossible mark? I think not. The impossible today may be almost routine accomplishment tomorrow.

I don't suppose anyone will ever know everything in medicine; undoubtedly, few will ever know everything in his own specialty. But how much better it is to be well-informed and well-trained in our specialty and to be ready to meet the full measure of responsibility entrusted to us, than to be only half as skilled and prepared as we could be.

And what a model the fully-prepared doctor or nurse anesthetist becomes for the rest of the hospital staff and the entire medical profession in the community. Undoubtedly, you yourselves look up to certain

physicians and colleagues because of their abilities, personality and leadership.

Why be the best possible medical man or woman?

Here's what the Roman slave and philosophy teacher, Epictetus, said in his Discourses: "What good does the purple do to the garment? What, but to be beautiful in itself, and to *set a good example* for the rest?"

Another important thing to remember is that you do not have to be an old-timer to be that good example. Scientific medicine is free of the shackles of certain, outdated traditions. For example, seniority among medical personnel is not revered in itself. It is skill, judgment, experience, solid background, continuing education and maturity that count.

This quality of personal initiative in medicine is one of the big reasons why we in the profession cherish our freedoms and all freedoms so dearly.

When a man or woman enters medicine, the sky is the limit. The only bars to advancement are the lack of individual drive. We are free to learn as much as we desire. We are free to select patients. We have unqualified responsibility to the patient. We have unrestricted exercise of professional judgment, and we receive a direct reward for our efforts.

The medical atmosphere certainly is one of freedom and individual initiative in all things. Of course, the pure air of medical freedom has been befouled at times. Nevertheless, it remains as the clearest atmosphere of freedom in the United States.

It should be our never-ending task to keep it that way, not only for ourselves and future medical men and women but also that it may serve as the best example of democracy-at-work to all other Americans and to the world.

Because we are able to work in this kind of an atmosphere, I certainly believe we have an obligation to society to become mentally and emotionally equipped to meet and handle eventualities and to serve the patient fully. Our scientific world is speeding along at an almost unbelievable pace and it is our enormous task to stay abreast of it.

At the same time that this race seemingly is taking all our extra efforts—both during working hours—and leisure hours—we dare not ignore or forget the personality of medicine.

From various corners have come criticisms about the lack of humaneness of medical men and nurses in the recent years of amazing scientific progress. The critics contend that we have been too caught up in the scientific whirl, and that we resemble something between a cold, matter-of-fact scientist and a Univac machine.

While many physicians and nurses may have lost some of their sympathy and understanding for patients in recent years because they have had to devote more and more time to the study of scientific developments in their fields, I do not believe that doctors and nurses have suddenly become Frankensteinian monsters or mechanical robots.

The dedicated medical person still knows that sympathy and understanding are just as important as scientific knowledge. We know the miracles performed by country doctors and nurses in days gone by—miracles performed with the human touch, instead of wonder medicines. So now, in practice, we try to blend our science with our art. We know that we must be both scientist and

humanitarian. We know that all the scientific training in the world cannot dry up the milk of human kindness.

Those of us who practice almost exclusively in surgery are not exempt from being sympathetic and understanding. In fact, I know of no medical person who should be more warm and tender with patients. The preoperative and postoperative periods are always anxious times for patients and their loved ones. The doctor or nurse who enters mentally into the feeling or spirit of the patient will understand and appreciate fully the patient's anxiety, and will comfort him.

This kind of perception is not rare among doctors and nurses. Of course, it is not the most common trait among medical personnel, either. Those with it should see that they don't lose it; those without it should cultivate the quality so that each patient can have true humanitarians serving them.

Naturally, I do not advocate becoming emotionally engrossed with a patient or patients so that you lose sight of your main objective: The maximum good of all patients.

There are many heartaches in medicine; many helpless, hopeless situations in which one can do little or nothing. If our emotions are bound closely to all these cases, anyone of us could break quickly under the strain.

There are personal errors, too, that can ruin the novice and the veteran. The best way to handle mistakes in judgment is to vow to oneself: "This shall not happen again."

Certainly, I do not believe in shrugging off mistakes by saying: "Oh, well, we're all human. Everyone is entitled to a mistake."

There is no honest consolation in that kind of an alibi. How much better it is for you and me to swear to improve our skills and knowledge and to be more painstaking in our future work.

And those cases in which no amount of skill, training, or diligence can prevent a bad result, it is even difficult to say: "Well, we did all we could."

All of us who have had this experience still wonder if all was done that was possible. Consequently, we search our minds and our souls, and we sometimes brood about a case or two. Probably with you—as it is with me—the hopeless case is the most heart-touching. But, nevertheless, we dare not become too moody. As always, we must be ready constantly to serve the next patient with calmness, efficiency and confidence.

I cannot give you any plain or fancy, simple or complex rules to follow in matters of human heartbreak. Each one is an individual problem which must be solved according to the mental and emotional capabilities of the patients involved.

Remember, however, that we can be of great assistance in these instances if we will only employ our best good judgment and human relations.

With these few things in mind—a high goal of scientific attainment, a burning desire to serve humanity and all faith and trust in medical and personal freedoms—let us pledge ourselves to maintain the high standards of anesthesiology and surgery. And let's always strive to improve our techniques and our understanding of patients so the world will benefit even more because of our brief, but dedicated, work for mankind.

The Anesthetist as a Professional Nurse

Janet M. Geister, R.N.
Chicago, Illinois

It gives me an abiding pleasure to greet the members of AANA. Twenty-five years ago I saw the beginning of this association. It had in it all the struggles that come when a young person strikes out for himself. The family wanted its members all under one roof; the fledgling wasn't sure there was a place for him in the outside world. Though the nurse anesthetist was not a stranger at the time of AANA's birth, there was doubt about anesthesia as a distinctive field for nurses. There was doubt about the need for a separate association, and doubt regarding your ability to carry through if you formed one.

You have come a far way in twenty-five years! The solid foundation on which you stand today, your accomplishments in establishing sound principles and standards of education and practice, and the recognition AANA has achieved as the authoritative body that speaks for this field of activity — all these are a heart-warming justification of the faith of your pioneers. These gains are at once a tribute to the quality of your leadership, and a reward to you members for your staunch support.

Today you can look at your first quarter century of association life with deep pride, and ahead to the next span of years with confidence. But you face a far different world from the one that confronted your pioneers — and no more important single task is before you than to gain perspective on the meaning and implications of the present scene. We have entered a new era in health care, and all of us who deal with health must re-set our sights. It is easy to adjust our practices to modern science; it is hard to bring our thinking into line with these practices. Changing ideas and gaining new perspectives are among man's most arduous tasks. "Knowledge comes, but wisdom lingers."

To understand today we must look at yesterday. The nurse anesthetist as a recognized factor in the health team, is a product of the health revolution of the past half century. She could not have emerged sooner for the time was not ripe. When the time was at hand she could not have delayed coming for the need was there. She has become a vital agent in the health force as sensitive to the changes that have come and that continue to come, as are her allies. Her own activities and environment have changed as theirs have changed.

Until the turn of the present century, the age-old scourges of infectious diseases had maimed and killed ruthlessly, chiefly among infants and

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young people. But Pasteur's discovery of the cause of fermentation which led to the germ theory of disease, brought about the greatest advances in health that the world has ever known. As his findings were blended with those of other scientists, there evolved two monumental truths. The first was that communicable and infectious diseases were preventable. The second, that health is the inalienable right of every human being.

When these ideas took hold miracles came to pass. The old morbidity and mortality tables were turned upside down. Hospital beds and obituary columns, once filled mainly by young people, were taken over by people considerably older. Health hungers grew; health became a public as well as a personal responsibility. Official health departments with broad programs of prevention and health promotion multiplied and research in the biological sciences began its amazing upward swing. Great voluntary health associations concerned with polio, heart disease, tuberculosis, et cetera, came into existence.

These spectacular changes brought others. Scientific data about *Man* and his diseases poured out in increasing tempo. The growth of medical specialties was inevitable, for no one practitioner could encompass all of the new in his practice. Multiple new procedures called for more kinds of people to serve the patient—and therapists and technicians in variety entered the scene. Thus, teamwork in patient care became the accepted pattern.

The effect on nursing of all this was dynamic. As nurses moved outward to meet the broader health needs of people wherever they were — in homes, shops, and schools as well as in hospitals — the growth of special branches of nursing was as inevitable as was the growth of specialties in medicine. Nursing education became a specialty when our old system of "night school" training had to be superseded by an organized, scientifically balanced curriculum, taught by qualified teachers. Public health nursing became a specialty when health authorities selected the nurse to carry to people in their homes and elsewhere, the new lessons of hygiene, sanitation, disease prevention, and health promotion.

So too with industrial nursing. When management realized that the most important element in production was not the machine, but the man behind the machine, the nurse moved from her anomalous place at the edge of the plant into its center to become an integral factor in production. Her attention focused on the whole man, not just his cut hand — and so another branch of nursing came into being. Other specialties like operating room, maternity, cardiac and psychiatric nursing have developed, while still others are in the making. Nursing administration, for example, is increasingly being recognized as a field requiring special preparation and abilities.

These branches were born, not out of wishful thinking, but out of need. It was need that created the field of nurse anesthetists. In an earlier day the administration of anesthesia was a rather casual matter, something of a side-line requiring no special skills. But as the science of anesthesiology advanced the need for adequately prepared anesthetists became sharply apparent.

Nurses' entry into this field was not a matter of expediency or chance

—otherwise the competitions of today would have ended the move long ago. The fact that 53 percent of the anesthetics given in United States hospitals at the time of your 1955 survey, were administered by nurses, demonstrates a wide recognition of the unique values of nurse anesthetists. Only a service that had proved its worth could have gathered such strength, and created a greater demand for such service than can at present be met.

We may ask: Is this a distinct branch of nursing, like public health and industrial nursing, or is a specialty built on a background of nursing values? There are similarities and dissimilarities, but the really important fact is that the nurse anesthetist is a genuine blood relation of nursing. This is demonstrated in two important areas. The first is that the very growth of the field proves that the intrinsic qualities of nursing provide a background on which to build this specialty.

Among these qualities are the disciplines of nursing—the disciplines that develop the poise and skills needed in meeting the unforeseen situations and emergencies that are always potentially present. The ability to observe and weigh symptoms is especially essential in a service in which slight signs may have portentuous meaning. And above all, there is needed in anesthesia the brooding concern for the welfare of others that brings young people into nursing in the first place. The nature of anesthesia and its importance in patient welfare and surgical success, make its administration a hovering and watchful task of the highest order. It would be absurd to imply that only nurses have this brooding alertness. Yet it can be said that the very character of nursing brings it out to an unusual degree.

Your second tie with professional nursing is that it is your source of manpower. Your ideals and standards center on a nursing background. You have established the need for such a background. If you let down or change your standards, your very foundation changes. Thus, you cannot be separated from nursing and retain your identity.

But there is still another tie. It is your love and respect and concern for nursing as a profession. In your title "nurse anesthetist" the word "nurse" comes first, as I am sure it also does in your hearts. The profession today is in a state of high transition. Nursing has proved to be an essential community service. The demands for more of it, for more kinds of it, for greater skills and versatility, have brought problems of unprecedented magnitude. Nurses work with the tools of science; they work with people trained in science. Therefore, nursing education must be of a substance and standard that parallel their responsibilities. This demand alone has brought mighty problems.

The addition of hordes of nonprofessional nurses to the patient care team before safe and equitable lines of demarcation had been worked out, has seriously blurred the status of the professional nurse. Yet an established and accepted status is absolutely essential to sound administration. Fragmentized, or "functional" nursing, separated the nurse from her patient, and morale went down as dissatisfactions went up, both in nurses and patients. New legal problems arise as nurses' orders include procedures that border on the prac-

tice of medicine. The problem of nurse shortage is treated almost exclusively on the basis of *numbers*, with only minor attention to the obstacles that prevent the efficient use of the available supply.

These problems, indicative of still others, are the concern of all nurses. No matter *what* is our special field, we are all in some way affected by them. But none of nursing's major problems, or those of our allies, are self-contained, and one of our most urgent needs is to get off our mental islands. We need to see our specific problems against a background of the general issues that face the whole group.

The very nature of our health situation and health practices today demands a united front, united planning. Out of the immediate past rose the pattern of teamwork; out of the present must come a more realistic and accepted comprehension of what it is. In our practices we go through the form of teamwork as each worker performs an allotted task, but good teamwork means much more than that.

Our patient's needs have changed. Once he was horizontal—bedridden, acutely ill. At the end of three weeks he was discharged "cured." Today many are vertical—ambulant, beset with long term chronic diseases with social and economic complications. Their number is legion already, and growing fast, and their needs grow with them. More years have been given their lives—now they want more life given to those years.

No longer can today's patient be considered "cured" when his acute symptoms subside. No longer can his care be limited to a part of his body. We know today that there is no single cause of disease—rather that man's whole environment has an impact on his health. These factors have changed the whole emphasis in our approach. The objectives of "comprehensive care" and "rehabilitation" are twin products of the health revolution. Comprehensive care that follows through until the greatest possible rehabilitation is achieved, is utterly essential in today's care. Otherwise the economic and health as well as psychological burden on society of a horde of unproductive, handicapped people would be too great.

But comprehensive care requires a form of teamwork that as yet we but dimly understand. Dr. Robin C. Buerki in speaking before the 75th Anniversary Conference at Marquette University said, "I see our problems growing and I don't see us doing enough about them. We need to educate the public and do a better job of teamwork. I don't want the doctor to stand as God and dictate what shall be done, but he should sit down with the administrator, the nurse, and the technician, and all the professional workers in the institution, giving and taking advice from the team as to how we can improve our care, and at the same time, where possible, reduce costs."

The great sweep of the health movement brought dramatic gains in the saving and promotion of life, but it also brought concurrent losses in relationships and practices. On the one hand we created the pattern of teamwork; on the other we built isolations between team-mates. As our specialties grew so did the islands between us. One of our sharpest losses is in what is called "communications". Too many think of it as a

new science, and are wholly engrossed with its techniques. Actually the effort to create understanding between people is as old as Adam and Eve. In its application to both patients and personnel in the hospital, attitudes and avenues are more important than techniques.

Dr. Esther Lucille Brown and Hans Mauksch comment pointedly in published articles on the lack of communications between the layers of people who serve the patient—especially doctors and nurses. The various layers may talk *to* but not *with* each other. Staff nurses speak bitterly, too often, of the lack of avenues for talking over pressing needs and problems with authorities, and of the distances between them and the front office. This gap widened when the custom of making rounds was dropped by many—in my opinion, one of our most tragic losses.

We cannot measure the effect of these trends and moves on the work of nurse anesthetists any more than we can measure their influence on other branches of health work. We know only that there is a need for better integration, better joint planning, and the levelling off of inequities. We know that for all of us there is a primary need for a greater awareness of the issues facing the health world, and of their implications for each of us. We know that teamwork, based only on manual cooperation is not enough.

The nurse anesthetist is not a second cousin, but a full fledged member of the patient care family. The quality of patient care that precedes and follows *her* service to the patient, bears strongly on her own successes and failures—and conversely, the quality of her work reflects in the successes and failures elsewhere. We are wholly interdependent in our work today. The increasing stress on the patient's "psychological preparation" for surgery, and on recovery room efficiency in speeding recovery, is bringing the nurse anesthetist into closer working relationships with all others in the institution.

The unity we need most today is not flat conformity. It has nothing to do with the structural set-up of our various associations. It is a meeting of minds and spirits—a pooling of our ideas and ideals so that together we can help our profession achieve its greatest usefulness in human service. In helping our profession we inevitably help our own group, and thus in the end, we help ourselves.

Psychology and the Nurse Anesthetist

Cameron W. Meredith, Ph.D.*
Oswego, New York

Psychology for the nurse anesthetist is, in its truest sense, applied psychology. That is, it is psychology as applied to anesthesia with special reference to the nurse anesthetist. Psychology itself refers primarily to how and why human beings learn and adjust. Psychology for the nurse anesthetist thus is concerned with the learning and adjustment of the nurse anesthetist in relation to self as well as others and the ultimate effect on the human beings involved.

Knowledge of applied psychology can be a powerful ally for the nurse anesthetist. It can account for the difference between human relationships which are satisfying and effective and those which are not; the difference between a high level of self-confidence and lack of it; and the differnce between a person who is basically encouraged and one who is discouraged. While there is much which is unknown about the psychology of human beings, knowledge of what is known provides us with several working hypotheses as to why people behave as they do. These hypotheses enable us to progress beyond the typical impulsive behavior often referred to as "human nature." This knowledge provides us with many choices of intelligent behavior. If one approach doesn't seem to work, there is another possibility, equally intelligent, at our disposal. We no longer need to rely on "trial and error" and be at the mercy of supposedly inalterable "human nature."

There is no implication here that the basic interest and attitudes requisite to nursing are unimportant. Psychology is certainly no substitute for a sincere interest in people, in nursing, and in service to mankind. Love for, understanding of, and patience toward fellow human beings, are taken for granted as psychologically worthwhile. Psychology can be, however, an important factor as to how one translates these desires and attitudes into action in a functional manner.

When one sets out to serve his fellow human beings, the possibilities are literally unlimited. How one relates to himself and to others is the key. Of course, professional skill and knowledge are of utmost importance, but, in the final analysis, it is what we do with what we know that counts. This *doing* has much to do with how we relate to people. It can spell the difference between truly serving mankind and exploiting mankind for personal status and prestige. It can be the mark of a truly professional person.

Basically, how a person feels about himself and others and, subsequently, how he behaves, depends pri-

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*Professor of Psychology, State University of New York, Oswego.

marily on two things: 1. his concept of the nature of man and, 2. the atmosphere in which he relates to other people. While this is an oversimplification of the dynamics of human behavior, it will serve, nevertheless, as a basic frame of reference for our discussion of psychology and the nurse anesthetist.

Nature Of Man

Within the limited scope of this paper, perhaps the most effective method of discussing the nature of man would be to list a few basic assumptions and their implications. Obviously, these are assumptions which the author believes are compatible with what we think we know about the human organism as well as with our democratic way of life.

The cardinal assumption is the *uniqueness* of man. Every human being is a unique person. Not only is the chromosome content of each person different but no two people have the same experiences. Each person's perception of the world thru his own eyes is different from that of any other human being. This is particularly true concerning one's perception of other human beings. He develops his own unique style of life as to where he is going and how he thinks he has to behave to find his place. Because of this uniqueness, every individual is a creative person capable of making a very special contribution to a group. He not only is capable of selecting what he wishes from his environment but capable of affecting and changing the environment. He has something to say about his destiny and he is *not* just a helpless victim of his environment.

Another assumption which goes hand in hand with uniqueness is that man is basically a social being. One of man's greatest desires is to belong to the human race and to cooperate with his fellow man in group endeavors. Contrary to opinions commonly held, the very existence of our democratic way of life depends on a maximum of social cooperation. Cooperation, rather than competition, is the basic motivating force for human progress in a democracy. A person who is given the privilege of assuming responsibility in a group endeavor knows he belongs. An individual can no longer go it alone. Our very survival depends on the cooperative endeavors of unique and creative participants devoted to the service of mankind. No better example could be cited than an effective and harmonious surgical team.

A third assumption is that each of us has dignity and worth, and, as human beings, we are all equal. Democracy is defined as the "treatment of others as one's equals". This does not rule-out difference. Rather we learn to utilize uniqueness and creativeness while relating as equals. It isn't "either - or", but both together. A feeling of equality encourages creativeness which is basic for progress. Equality, uniqueness, and progress add to one's feeling of belongingness. Unfortunately, it is often assumed that difference and uniqueness are synonymous with superior-inferior human relationships. This however is a view from people who are autocratically oriented. People who prefer democracy learn to welcome and respect uniqueness yet at the same time to relate as equal human beings.

A fourth assumption is that we human beings do not just *act* in a habitual or instinctive manner but react to each other in a variety of unique ways. However, we don't just *react*, but at a given time *act* accord-

ing to our own unique perceptions. In other words, human behavior is not nearly as predictable as that of "mother nature" where scientists can pretty much depend on anticipated reactions. In human interaction, if one individual changes his behavior, others are likely to change their behavior as they react, but the reaction is somewhat unpredictable. Since each will change according to his unique perception and unique purposes, an understanding of each individual involved is required before more difficult human relations problems can be alleviated. Nevertheless, the fact that a change in one's behavior will usually cause others to change, is one of the most powerful resources at one's disposal. That is, if you want others to change their behavior, try changing your own first. It is much more effective than attempting to impose your will on other equally powerful human beings.

A fifth assumption is that a person behaves the best he can. Based on his perception at any given moment and on his unique purposes, he makes the decision which he considers best for the preservation and enhancement of his psychological self. Implying that a person should have behaved better is extremely discouraging. He already knows that there is room for improvement, but, in order to develop the courage and self-confidence required for individual progress, he must be accepted as being "good-enough" as he is. When he is accepted for what he is, he can accept failure as an invitation to try again.

Of course, it is always good insurance to recognize what a person does *well*. This is the secret of encouragement which in turn builds self-confidence. In the long run, what a person knows and what he can do is much more important than what he doesn't know and fails to do. Undue emphasis on errors often discourages a person to the point that he hasn't the confidence to do well with what he knows.

While many more assumptions could be listed, these five serve to illustrate how one's assumptions concerning the nature of man have much to do with human relationships. It is apparent that these assumptions portray an optimistic view of man. There is a minimum concern with the past. The emphasis is on present behavior with a forward thrust into the future. Intrinsically, man is considered to be a *social, purposive, unique*, and *cooperative* human being.

Basic Atmosphere

Another important factor affecting a person's behavior is the psychological atmosphere in which he relates to other people. For the nurse anesthetist this may be in the hospital as a whole, the surgical suite, the operating room or even a classroom. To be effective and satisfying for any one individual, it is assumed that the basic atmosphere should be compatable with one's basic assumptions concerning the nature of man. Thus, the basic atmosphere described here will be built upon the assumptions presented in the first part of this paper.

First and foremost is the creation of an atmosphere where there is dignity for *work*: where work is something to get-*into* rather than get-*out*-of. Of course, there are always routine tasks which we hope can be done eventually by machine, but, rather than enable us to get-out-of work, this would merely free us to be of greater service to mankind. The atmosphere needs to be such that each and every participant feels that his

work responsibility is an honest contribution to the total effort. As important as salary, physical working conditions and reasonable working hours are to high morale, they eventually lose their effectiveness unless there is more basic human satisfaction derived from one's work. Somehow or other it must make a person feel better about himself, his fellow human beings and his belongingness. He must feel that he is doing his part. Materialistic incentives and rewards are very limited in this respect.

Nevertheless, one must still face the reality of time and its relationship to work. Time is the base for work and it is literally never available "free of charge". If one wishes to serve mankind, then he must spend time working at it. If one adds work to a normal daily time schedule, something has to give. If one member of a team fails to carry his fair share of work, then someone else has to add to his time schedule. The assumption that man is basically lazy and that, additional work and time can be squeezed in somewhere, is an insult to a professional person. An hour of work for a professional person is an hour of service to mankind —no more or no less. A truly professional person is learning continuously in an attempt to improve the effectiveness of his work, but, at any given time, the best he can do with an hour of work is to perform an hour of service.

It is hoped then that work itself is so intrinsically satisfying that participants want to accept the *responsibility to work*. This is not intended in any way to belittle the importance of minimum materialistic rewards but rather to give work the dignity that it deserves in our cooperative society. It is a sad commentary on our attitude toward work when a man has to retire before he realizes fully the dignity of work, both for the individual as well as our society. Knowing the therapeutic value of work, it is no wonder that so many of our older people have lost respect for themselves and feel that they no longer belong. Work is not only an economic necessity but a most important psychological necessity.

Once an individual has become aware of the value of work and has accepted the responsibility to work, there are at least three means of creating an atmosphere conducive to effective and satisfying work: 1. freedom to work, 2. mutual trust, and 3. encouragement.

Freedom to work: In order to benefit from man's ability to make unique contributions, man must have freedom to work and to create. Freedom does not mean license. It means rather the right to make choices and to try things out within the rules and regulations of the group. It means, with the exception of life or death, that it is acceptable to experiment and to fail. Failure is an invitation to try again because success will mean a unique contribution which may benefit all. A human being must find the courage to be imperfect lest he not have the courage to try at all. An atmosphere of freedom to work is conducive to courageous behavior. When combined with responsibility to work, mankind stands to benefit.

Mutual trust: One of the most satisfying and encouraging experiences for man is to participate in a group where he feels trusted and where, in turn, he trusts the other members of the group. It is a fertile atmosphere for cooperation as well as creativeness.

Implicit in trusting is the willingness to accept every human being as an equal. Genuine mutual trust can only take place among equals. This does not rule out uniqueness and difference. One can trust another human being who is different but mutual trust does not flourish when difference results in superiority or inferiority as human beings. The result is often blind trust, one way trust, limited trust or no real trust at all. The secret is to accept each person as an equal human being, and, at the same time, respect and utilize uniqueness.

Implicit also in trusting are the assumptions that man behaves the best he can and that man has the ability to change his behavior. Trusting that a man behaves the best he can, implies that he is good as he is. This builds self-confidence and prevents a man from having to defend or prove himself over and over again. Self-confidence, in turn, gives a man the courage to change his behavior in the hope of improvement.

Trusting is contagious. If you wish to encourage an individual to trust you, try trusting him first. He may not believe it and he may even test you. Regardless of the outcome, one of the most effective ways of establishing mutual trust is for you to trust your fellow man first.

Encouragement: Where one finds basically encouraged people, one finds respect for the dignity of work. There are no lazy, bad or useless people—just discouraged people.

Every suggestion made thus far has been a suggestion for encouragement. It is encouraging to accept and respect man's uniqueness; to accept him as an equal human being; to help him to feel that he belongs as a social and cooperative human being; to give him credit for being able to change his behavior and for having a part in determining his destiny; to assume that he behaves the best he can; to give him freedom and responsibility to work; to trust him; and to concentrate on what he does well.

The last suggestion is probably the most powerful resource at the disposal of one who wishes to learn the art of encouragement. Recognizing what a person *can* do and providing him with plenty of freedom to work in areas where he can succeed, is extremely encouraging. It builds the self-confidence required to face frustration and failure without loss of courage and self-respect. Negatively speaking, undue emphasis on errors and failure is discouraging, and, everything else being equal, results in less self-confidence and less desire to be a responsible member of a cooperative team. One of the greatest hopes for the preservation and enhancement of our democratic way of life is an encouraged populace.

With this brief presentation as a basic frame of reference, let us now examine suggestions for implementation in situations involving human interaction.

Implementation

If one could observe during any week in the year the thousands of operating room teams which serve mankind continuously, it would represent one of the most dramatic illustrations of cooperation known to humanity. Things do go well most of the time in our hospitals and human beings are served effectively. The physical and emotional health of patients as well as hospital personnel is surprisingly good.

Nevertheless, there are areas which need attention. While the desire for

better trained and more competent personnel is always high on the list of suggestions for improvement, there is considerable agreement that top priority should be given to the area of human relations. Not only does this area of morale need more attention, but each individual needs to learn how to relate to one another more effectively.

The nurse anesthetist especially needs to know how to behave effectively in situations involving human relations. Not only does the nurse anesthetist encounter the usual situations involving patients and co-workers, but, as a member of the surgical team, she is confronted with one of the most dynamic situations of human interaction. Her role is a strategic one indeed, and, added to the tension created by the life-or-death atmosphere during every operation, it certainly calls for a high degree of skill in human relations.

An attempt will be made to suggest general principles of action for the nurse anesthetist. While rare, there are those trying situations where the behavior of the patient or co-worker appears to be useless, annoying or even destructive. These are the situations where love, patience and understanding are not enough. The key question is, "What does a nurse anesthetist *do* in such situations?"

Probably, one of the most valuable general principles is: *do what you can do something about*. Negatively speaking, it is: *do not try to change that which you can not change*. This does not mean that we refuse to work on human relations problems which appear "impossible" but rather, that we concentrate on factors within the situation which we *can do something about*. In reality, this often means that we play the percentages and *do* what appears to have the best chance of bringing about change.

If this general principle were translated into a basic principle for individual behavior, it would read *mind your own behavior!* In other words, you can do more about changing your own behavior in human relations situations than you can about changing the behavior of others. This is particularly true when "preaching" or "pushing" is employed in one's attempt to change other people. The odds are against forcing other people to change. After all, they have the ability to determine their own reaction or to refuse to react.

On the other hand, every person has the power within himself to change his own behavior. Here, as stated previously, is one of the most powerful resources at the disposal of an individual who wishes to influence the behavior of other people. First, it is "do-able" and, second, it stands an excellent chance of encouraging the other person to stop what he is doing and to react in a different manner. Of course, there is no guarantee that his behavioral change will be more useful or constructive. Nevertheless, any individual *has* the ability to continue changing his own behavior. Given enough time and the courage to use his creative ability, there is a good possibility of finding a way of behaving which discourages destructive behavior and encourages constructive behavior in a given situation.

Let us illustrate these principles by a general analysis of the typical (but realistic) operating room situation involving a "prima-donna" type surgeon of questionable temperament who usually makes life miserable for

everyone concerned (at least, those who are not anesthetized). These are men whose behavior mystifies, if it does not terrify, most members of a surgical team. Investigation would reveal that many of these men, not only maintain this style of behavior throughout their professional lifetime, but often enhance it. Why do they behave as they do? How do they get away with it for a lifetime?

While it is not easy to discover why adults behave as they do and it requires careful analysis to determine the unique life style of any one individual, let us examine three possible reasons why our hypothetical surgeon might act this way. One possibility is that he may be trying to prove that he is "boss". He may feel that the only way to find his place is to display power over others and to maintain his position by defeating others. A second possibility is that he may desire to be someone "special". It may be that he thinks that the only way to do this is to annoy or hurt others. It is not easy to establish an outstanding reputation by being a congenial and cooperative person. Fortunately for mankind, there are many doctors of this caliber, which makes the competition difficult. However, it is relatively easy to become known as the most uncooperative doctor on the staff. It is similar to a pupil who becomes known as "the worst child in the school". Such a reputation spreads like fire and practically guarantees an individual a "special place". A third possibility is that he may be playing the role of a "spoiled child". He may want what he wants, and, if he can't get it through normal behavior, he may lose his temper. He expects undue service, and, by one means or another, he is accustomed to receiving it. If necessary, he may resort to position, power or reputation to achieve his purpose.

There is certainly no implication here that a nurse anesthetist should be capable of such psychological analysis. However, knowing that behavior, particularly misbehavior, is purposeful, enables one to cope with it more effectively. In fact, there is an excellent rule-of-thumb at the disposal of anyone who respects and understands the ingenuity and power of an individual who misbehaves. It is simply this: *how you feel at the moment of the misbehavior is usually synonymous with the purpose of the individual misbehaving*. To return to our illustration, if a nurse anesthetist feels like fighting with the surgeon, the chances are that he wants her to fight, knowing very well that he is in an excellent position to defeat her; if she feels annoyed or hurt, the chances are that he wants to "get-her-goat" or "hurt-her-feelings" to enhance his reputation of orneriness; and if she is tempted to give him undue service when he loses his temper, the chances are that this is exactly what he expects her to do. When such a person (our hypothetical surgeon) succeeds in getting people to behave as they feel, he is literally encouraged to try to get away with his misbehavior for a lifetime. The gullible recipient merely reinforces the misbehavior.

This leads us then to our third principle: *When trouble brews, avoid obviously undersirable behavior, but, regardless, do not do what you feel like doing*. Obviously, one should always avoid behavior which tampers with life-or-death, inflicts injury or destroys property but there is no law that compels one to do as he feels. And, when an individual realizes that doing what one feels like doing in

conflict situations leads to defeat and encouragement of misbehavior, there is little to lose and much to gain by behaving in another way.

To return again to our illustration, if a nurse anesthetist were to refuse to fight, to be annoyed, to be hurt, or to give undue service, it would be very difficult for her antagonist to achieve his purposes. It would at least give him some cause to consider the possibility of changing his behavior. Of course, the first change might be in the nature of intensifying his misbehavior to see if her unpredictable behavior were not an accident. However, if she stands her ground (in addition to her usual fine performance as an anesthetist), there is an excellent chance that her antagonist will discontinue his orneriness. In fact, he may increase his constructive behavior. It is at this point that she could move from "don't" behavior to "do" behavior by honestly recognizing the improved behavior for what it is worth. In other words, it is excellent insurance to follow up the discouragement of misbehavior by employing the "art" of *encouragement* whenever possible.

In way of summary, here are a few specific suggestions for adjustment to misbehavior:

1. Ignore the misbehavior. Be so oblivious of it that there is no chance of it bothering you. Prove your ability to ignore by *saying nothing* with your voice, eyes, or actions. The silent treatment solves many a tense situation. "Preaching" leaves you wide open to defeat and humiliation.
2. While you bide your time by ignoring and remember not to do what you impulsively feel like doing, use every ounce of your creative ability to determine how you are going to change *your* (not the other person's) behavior. Just keeping quiet is a change for most people. Maybe you can turn your back, move away or even leave the room.
3. If simple changes are not effective, then do the unexpected. Agree with your critic when he implies you're stupid. Admit defeat just when it is least expected. Praise him for his insults. If you have never shouted back, shake the operating room with a bellow. Undoubtedly, you can think of many ethical yet unexpected ways of behaving.
4. Offer a constructive suggestion. It is a good guess that every member of the team is looking for the way out of a tense situation and your unique suggestion might just do the trick. You certainly haven't anything to lose by trying.
5. Remember, there is some "good" in everyone. While love, understanding and patience are excellent insurance, your recognition of what people do well and your acceptance of them as creative, responsible and important members of the team will result in a degree of *encouragement* which is priceless. THERE ARE NO "BAD" PEOPLE, JUST DISCOURAGED PEOPLE. When you alleviate discouragement, you are helping to bring about a new era in human relations. An era for which we have all been waiting for generations.

AANA, Its Members and its Rules

Lillian G. Baird, C.R.N.A.*
Ann Arbor, Michigan

As members of a professional association, we have devoted many years to the development of sound organizations, both on a national and on a regional level. That we have succeeded to a certain degree is evidenced by our continued increase in membership and our continuing service to the members; but, increase in membership alone does not justify our existence. We must adhere to the highest tenets of truly professional persons and it is to this often overlooked phase of our organizational life that I will devote my remarks. As children we learned certain disciplines. These disciplines were imposed upon us by our elders and were designed to guide us into maturity without the trauma of first-hand learning of certain rules of conduct. Through adolescence we continued to learn that compliance with certain fixed rules resulted in positive benefits to ourselves and to others.

Coming to maturity we learned to judge the value of rules and learned also to comply with written and unwritten laws and disciplines. In our training schools for nursing most of us first learned of the special rules that apply to professional groups and are adopted by them for guidance and for the good of those whom they serve. Embodied in the Nightingale pledge, the nurse's code sets a high goal for dedication to a noble calling. After entering the specialty of anesthesia, we learned of the value of a special professional organization. Having become members of a special professional group, we now become concerned with a more specific type of discipline than we have learned before. What is a professional organization? A group of persons who have special knowledge, voluntarily grouped together to carry out certain objectives. These objectives contain self-imposed duties for advancing the profession, for disseminating knowledge, for guarding the standards of the specialty and for continuous growth, but above all else, members of a professional organization must have one devotion that stands above all others, that is, the devotion to serve mankind. Pride in the ability and knowledge that makes it possible to do good to mankind is the true stamp of the professional organization of which he is a part. Members of the American Association of Nurse Anesthetists have imposed upon themselves certain rules that experience has convinced them are good for the individual and for the group but more important still are good for the patients whom they serve.

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* President, American Association of Nurse Anesthetists.

Early in our organization our founders set forth certain objectives for the association. So well conceived were these principles that they still serve unchanged to cover the entire program of the A.A.N.A. Nor has there been need to curtail any activity for the good of the member or the patients served by members of A.A.N.A. for lack of an objective defined in the original Articles of Incorporation. The objects for which the American Association of Nurse Anesthetists is formed are:

A. To advance the science and art of anesthesiology
B. To develop educational standards and techniques in the administration of anesthetics
C. To facilitate efficient cooperation between nurse anesthetists and the medical profession, hospitals, and other agencies interested in anesthesiology.
D. To publish periodicals, to issue bulletins from time to time, to aid in the general purposes of the organization
E. To establish and maintain a central bureau for information, for reference and assistance in matters pertaining to the science and art of anesthesiology.
F. To promulgate an educational program with the object of disseminating through proper channels the importance of the proper administration of anesthetics.

The bylaws of the American Association of Nurse Anesthetists are a set of rules adopted by the members to enable the group to accomplish its purposes with fairness to each member and to protect the professional standards. Studying the bylaws in detail should be a professional obligation of each member. We have discovered, however, that we are most remiss in knowing the rules and in many instances in complying with them.

The bylaws provide for certain qualifications that are to be met before an individual nurse may become a member of A.A.N.A. As the Association developed, and as the demands for additional knowledge became apparent, the Association's members have, from time to time, changed the rules as they pertain to the eligibility of nurses for membership. In each instance the change has been in the direction of more rigid rules rather than relaxation of the rules. In addition to requirements of high school graduation or equivalent education, each member of the association must be a graduate professional nurse who is in good moral and ethical standing in the profession.

Somewhere in the development of the association a misconception was conveyed to the members that membership in the professional association absolved the member from registering as a nurse in the state in which she worked. In an effort to protect themselves against the ill effect that could result from failure to comply with the law, the members adopted a revision in the bylaw that now makes it necessary to "maintain current valid registration as required by the state in which the member practices or otherwise has complied with the legal requirements of the state to practice nursing therein or is exempt from such requirements by the state law". It is amazing to us that more than three years after publication and discussions of this requirement have been placed before the membership that we still have

14% of our members who fail to give such evidence. There are members who believe that the A.A.N.A. membership number is equivalent to the license number. It is no more valid for a nurse to practice any type of nursing, be it general bedside nursing or a specialty such as anesthesia without being licensed to do so than it would be for a member of the American Automobile Association to drive a car without a license. This rule was adopted to protect the members and to overcome the misunderstandings concerning registration. As professional nurses we are obliged to comply with the law.

Some of our members have been told by individuals that they need not register. Some of these individuals are actually members of the state boards of nurse examiners. After thorough investigation of the laws of the states, we can find no evidence that any state exempts any nurse, be she general practitioner or specialist, from registering and information from any source to the contrary should be investigated thoroughly.

Just as membership in the American Medical Association does not absolve a physician who has specialized in some branch of medicine from obtaining a license in the state in which he practices his specialty, neither does membership in A.A.N.A. absolve nurses who have specialized in anesthesia from obtaining a license to practice nursing.

Every active member of the association has the privilege of voting. Relatively few take advantage of this privilege. Fewer still are willing to accept the responsibility and the privilege of holding office, of serving on committees, or in other ways of giving to the association for the greater good of all anesthetists. With a membership close to 9,000 it is not good that we have difficulty in obtaining the names of 12 to 15 persons to place on the ballot, in compliance with the bylaw.

Realizing that many women in professional life also have private lives and families, a special category of membership has been created making it possible to sustain an interest in the association during periods of inactivity. Inactive members receive all of the benefits of membership for greatly reduced dues. We have each year reports of members who fail to comply with the sworn statements that they have signed that they will pay active dues if they return to active duty during any fiscal year.

Local Associations

The bylaws of the A.A.N.A. provide for members of A.A.N.A. who live in any geographic area to form local associations. Such associations adopt and maintain bylaws and standing rules that comply with the objectives of the A.A.N.A. We now have 50 organized and affiliated groups of members. Some of the associations are ten times as large as the original group that founded A.A.N.A. These groups are often confronted with the same problems that confront the national association:— Lack of willingness on the part of individual members to help in the association's affairs by serving as officers or on committees. The time has come when many of the state associations will be in a position to consider permanent staffs, such as we have in the national association, to take care of some of the activities that cannot be carried forward effectively by voluntary officers and committees.

The rule that has been adopted by the members provides that any member who is living or working in a given state will be a member of that state association. In this rule, also, we have misunderstandings. There is a misconception that if A.A.N.A. membership is held in one state, and licensure is obtained in that state, the member has a right to practice nursing in a neighboring state without obtaining licensure. In some instances we have had members who have licensure in a state 1,000 miles away maintaining a mailing address in that state although working in another state without licensure. This evasion of the rules can only lead to disaster if the individual so practicing should run into difficulties. Here again, the rules are made for the protection of the member and devices for evading the rule can bring harm, not only to the individual, but to the group.

Certain state organizations have banded together into sections or assemblies. Just as the state association has bylaws which must conform to the objectives of A.A.N.A., so too do the assemblies. Some of these assemblies have made special rules concerning assessments to help provide for the extra activities that occur as the result of the group meetings. When these assessments are agreed upon and incorporated in the rules of the assemblies, the members of the assembly are bound as they are by other rules that are adopted. Just as in any democratic process the member has recourse to the open meeting to have the rules changed if they are not in keeping with the wishes of the majority.

An association composed of many members must find a way for conducting its affairs between meetings of the members. A.A.N.A. selects a Board of Trustees, to whom are assigned certain responsibilities and duties. Here, as in the case of officers, it is becoming increasingly difficult to interest members in serving in this capacity. The states are divided into regions for voting purposes, each region having a proportionate number of members. Unless the members in that region select with care, their power to control the association's affairs between annual meetings is lost to them. The responsibilities of the Board of Trustees are many and it is imperative that the members of the Board be selected thoughtfully, not necessarily the most charming or the most ingratiating individual makes the best member of a Board.

Unlike the Board of Trustees, members of the executive staff are not elected but are appointed. They are selected to do the work assigned to them by the Board of Trustees and the executive office is maintained as a central point for conducting the business of the association. The work performed by the executive staff is for the good of all members and individuals who unnecessarily utilize the time of members of the executive staff are depriving other members of their fair share of the attention they deserve as members.

Much of the work of the association is conducted by committees. All committees are responsible to the Board of Trustees and receive their assignments of projects from the Board of Trustees. A.A.N.A. has been singularly fortunate in the willingness of members to participate in committee functions. It is a sad fact that few persons are leaders and doers. Many prefer to let someone else do the work while they sit back and criticize. With the aid of the

Planning Committee, the Board of Trustees tries to select its committee members with care, and because of the inertia that exists in many instances the Board is prone to ask again and again for the service of a member who has shown ability and interest. The chairman usually makes or breaks his committee's projects. The qualification of leadership should be the first criterion for selection of a committee chairman. Insofar as the association can, it tries to repay the actual cash outlay for committee members, but no amount of pay can compensate for the fine work that the committees do for you. Members who wish for the success of the association's projects may start in a small way by volunteering to serve on local committees, and, as experience is gained by the member and confidence in the member is built up by performance, it is almost a foregone conclusion that that individual will be asked to serve in ever-increasingly important ways.

To maintain the activities of an association such as ours, it is understandable that dues must be paid. The members themselves have established the amount of dues that are to be paid and the amounts selected cover the needs of both state and national associations. Certain portions of the dues are restricted to certain purposes. For instance, of the $15.00 active membership dues paid to the A.A.N.A. treasury, $5.00 is restricted to the education and accreditation program. From the dues also, the members receive without additional charge, subscriptions to the Journal and to the News Bulletin. Payment of the dues entitles the member to equal privileges as all other members in the same category of membership. It is the responsibility of the Board of Trustees to spend the money wisely in its conduct of the affairs of the association. A.A.N.A. has been most fortunate in the cooperation of its members and their willingness to contribute to the programs. A few members, however, believe that the payment of dues entitles them to privileges far above the services available to all members. Few organizations have been able to offer so much to its members for so little and it is well for each of us to evaluate from time to time the benefits that are received.

Americans are great joiners. The characteristic of Americans to join voluntary associations, we believe, has worked great good. Associations such as ours are patterned after basic democratic principles, primarily based upon the democratic acceptance of the will of the majority. A.A.N.A. serves as a potent influence for improvement of communications between the individuals and the group.

I have reviewed with you a few of the rules that govern us as individuals in the A.A.N.A. The purpose of our organization has been clearly defined. The rules for governing it have been laid down. The rules may be changed if it is the will of the majority. By grouping together, nurse anesthetists have great power to serve mankind. This grouping together does not mean that the association or its members will act to put pressure upon any person or group of persons to conform to certain standards of practice or to dictate certain terms of employment. It does not mean that the individual must conform in every detail of his professional life to a fixed pattern. The members themselves have set up certain patterns that they believe are for the good of its members and of the persons whom

they serve, and since we believe that these rules should govern our conduct, we wish to re-emphasize the need for compliance with these rules. We have an officially adopted Code of Ethics. These rules were conceived according to the highest principles of professional conduct. To what extent do we use this guide? Too often we hear of members whose conduct seems to indicate that such rules had never come to their attention. I would recommend that not only in times of uncertainty but, also periodically, we each take time to re-read and reconsider the rules for ethical conduct. I would also urge that we be more concerned about our own conduct than that of others. As professional people we have certain privileges granted to us by law, as citizens and as nurses. We have the privilege of the respect of those with whom we work. We have the privilege of the respect of those whom we serve. However, these are privileges which must be earned. To deserve these privileges we must accept certain responsibilities.

We must accept the responsibilities imposed upon us by law and the self-imposed responsibilities. To the extent that we accept these concepts into our personal and professional lives, to the extent that we set an example for those who may be affected by our attitudes and actions, to that extent and only to that extent are we entitled to the privileges of our profession. Can we recapture the high purpose of our first professional ideals when we accepted the Nightingale Pledge, can we accept the rules by which we live, can we accept the challenge for greater and better service to humanity? When we accept the responsibilities as well as the privileges of our profession, we can proudly say, *"I am a professional nurse anesthetist."*

Specifically, within the association we have bylaws as our guide, not only as individual members but also as officers. The members have voted to retain certain privileges to themselves:—The right to nominate and the right to elect officers, the right to determine the amount of dues, the right to amend the rules. Since these rights have been reserved, it is also the obligation of members to carry out the duties necessary to exercise these privileges. Let us not be merely dues paying members; let us be members who are aware of the purposes of the organization; let us be members who are interested in the good that we may do by combined action; let us be members who criticize only in a constructive manner; let us assume our rightful place, not only in the profession but in the organization and in the community in which we live. Only with these goals before us, can we rightfully say that we are more than dues paying members.

Ahead of us lies the impenetrable future, behind us are more than 25 years of professional organization that shows that we have surmounted many difficulties. What difficulties may lie in the future, we cannot say. Of this, however, we are sure, that by maintenance of high professional standards and by careful watch of the rules we can predict an ever stronger and better association.

Hazards of the Postoperative Period

Richard H. Barrett, M.D.*
Hanover, New Hampshire

The hazards of the postoperative period are numerous, or perhaps it would be more nearly correct to say that the hazards of this period *may* be innumerable. Anything can happen—and frequently does. However, it is not the *happening* which creates a hazard, but rather the way the happening is handled or treated.

I have often said: There would be few problems in anesthesia—or anything else for that matter, if it were not for people! Nature has a wonderful way of solving problems, but many of the man-made (*and* woman-made) problems are too complex for even Mother Nature to handle!

Take for example, simple laryngospasm. In the average situation of laryngospasm, if too many helping hands and so-called helping drugs are not interjected, nature will usually relieve this condition. However, she is rarely if ever, given a chance. Instead, someone is usually on hand to try to pry open the mouth of the afflicted subject, if trismus is present or someone is pushing on the chest, or blowing gases into the mouth, or doing several other, equally useless, procedures and not giving Nature a chance.

Masterly *in*activity is frequently the most effective form of treatment for this, as well as several other conditions.

The first and last time that *I*, personally, had laryngospasm, I was standing at a bar in Boston, sipping milk—for purposes of this paper—when, in the middle of a sip, I decided to laugh. This, I soon learned, was poor timing on my part!

Nature never intended to have milk—or any other foreign substances—in my trachea. She responded by closing the entrance of my larynx. This situation I found to be quite unbecoming to my normal habit of passing air, in and out through this physiological trap door; therefore, being human, I responded by becoming somewhat panicky.

Nature had, apparently, expected this foolish response on my part; so, instead of having simply a closed trap door, which might be opened easily, I then had a closed trap door with associated spasm of my vocal cords or to be more technical—I had laryngospasm. It's an *awful* feeling! (some people might call this same condition "choking", but I prefer the more refined term: "laryngospasm".)

All of the other people in the room with me, at that time, were anesthesiologists. If you ever want to see a mass of helpless humanity, you should see a bunch of anesthesiologists standing around a milk bar—or

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* Director of Department of Anesthesiology, Mary Hitchcock Memorial Hospital and Chairman of Section of Anesthesiology, Hitchcock Clinic, Hanover, New Hampshire.

any other kind of a bar—when one of their group is having laryngospasm. I can assure you that such a picture is not conducive to prompt recovery of the subject concerned.

One thing I can be thankful for is that none of these men—and women—had a laryngoscope, a bronchoscope, or even an endotracheal tube with them. If they had, I fear that, today, my diction might have been somewhat hampered beyond my normal mumble.

There happened to be one fellow in the group who took my arm and appeared to be not the least bit disturbed by my predicament. He informed me, quietly, to "take it easy."

As you have noticed, the laryngospasm finally subsided. It seemed an eternity to me. It was actually about fifteen seconds. I think *every* physician and nurse should experience laryngospasm, at least once. The treatment in this case was good. It consisted of practically nothing. Fortunately, no one slapped my back. And—no one picked me up by the heels, and dangled me in the air, and there was no instrumentation. Needless to say, I was pleased by the outcome of this case. But, I was doubly pleased, because I was treated by one of my former residents. This type of treatment is what I mean by "masterly inactivity."

When a patient, in the recovery period of anesthesia, develops laryngospasm, certain basic procedures should be followed. *First,* lower the head of the bed. This tends to remove any foreign matter, that may be present in the pharnyx, away from the upper end of the larynx. This foreign matter could be blood, mucus, vomitus, the distal end of a pharyngeal airway, or some other common, or uncommon, form of matter. When present, this matter should be removed by suction, instrumentation, or manually. In doing this, care should be taken to avoid irritating the proximal end of the larynx. Failing to carry out this pharyngeal toilet, in a careful manner, may result in prolongation of the spasm.

Sometimes a small dose—3-4 milligrams—of succinylcholine, given intravenously, may be used to facilitate the passage of an endotracheal tube. The necessity for this procedure will be rare. The best procedure to follow is to simply pull the angles of the mandible forward, after careful pharyngeal toilet, and *wait* for the patient to breathe. I have occasionally found it necessary to wait as long as two or three minutes before the patient will "take a breath". This seems like a long time, but it is far better than removing pharyngeal "divots" which cannot be replaced.

Several years ago I used to treat an extreme condition of laryngospasm by blowing 100% carbon dioxide directly onto the vocal cords, with the use of a metal throat-aspirator. This tended to literally freeze the vocal cords, and they would fall apart, thus allowing passage of air. This "deep freeze" method is effective but I do *not* recommend it.

With the advent of light anesthesia, the incidence of laryngospasm is practically nil, because practically every patient is awake or nearly awake, on his return to the recovery room from the operating theater.

Postoperative vomiting is now so rare, in our institution, that when it does occur, we look upon it as a complication.

In this age of controlled and assisted respiration, we now have a new

possible complication. It is a new form of hypoxia with which to deal—called "diffusion hypoxia".

As one breathes for a patient, by pressure on the rebreathing bag, nitrous oxide is forced into the blood stream where nitrogen and oxygen usually are found.

On completion of the operation, after the endotracheal tube or mask is removed, if the patient has not been breathing for several minutes on his own volition, there will be a rapid diffusion of nitrous oxide out of the blood stream into the alveolar spaces of the lungs. Here, the nitrous oxide will be rebreathed.

This condition, if it does take place, will occur in the first few minutes after removing the face mask or the endotracheal tube. The patient will have all the signs of hypoxia and may need treatment with oxygen, by face mask.

If the condition is recognized quickly and treated properly, there will be no complications. If diagnosis is *not* made and treatment *not* instituted, the complications will be those typical of hypoxia in general. Administration of a high concentration of oxygen by face mask will cure the condition.

Not long ago in our institution, I was called to our recovery room to see a neurosurgical patient who was having difficulty with breathing. He was having trouble *inhaling*, but once he got sufficient air, he exhaled easily. A medical man, that is, an internist was present when I arrived. He presumed that the patient was having an asthmatic attack. The picture was perfect for asthma, except for one outstanding finding: the patient could exhale easily which is quite the opposite with asthma. There was obviously something obstructing the inflow of air to the patient's lungs. On opening the mouth, a gauze pack was found.

An endotracheal tube had been used for the anesthetic procedure and two—not one—gauze packs had been placed around the tube in the pharynx to facilitate assisted respiration. One pack had been removed before extubation. The other was still with the patient.

This was an anesthetic complication. The case was brought up by our department of anesthesiology, in Surgical Grand Rounds at the end of the week.

Here is an example of the fact that most mistakes, or man-made complications in medicine, are not, by themselves, harmful to the patient, but failure to recognize these mistakes, or complications, may result in disaster.

The treatment of hazards of the post-operative period is quite akin to my own definition of the practice of anesthesiology itself. I have always said that the true science of anesthesiology is knowing what to do next, not what to do now.

I have mentioned "light anesthesia". By this I refer to that type of anesthesia which is produced by the use of relatively innocuous anesthetic drugs, combined with muscle relaxing drugs, which are described as being curare like in end result.

Every day, throughout the United States and elsewhere, thousands of patients are put to sleep with a small dose of thiopental (Pentothal® Sodium), nitrous oxide, or ethyl ether. Almost immediately, to any one or a combination of these, or similar agents, a muscle relaxing drug is added, by the intravenous route. Apnea may or may not be produced. An endotracheal tube may or may not be used. But one thing certain, these patients are carried on

assisted, or controlled respiration throughout the operation. The curare-like drugs are added, as indicated, during the procedure. The hypnotic or anesthetic drugs are used at a minimum.

On completion of surgery, the endotracheal tube, or face mask is removed and the patient is asked to open his eyes. In our own experience, it is not uncommon for the first words spoken by the patient to be: "When do I eat?" This question has been asked even after a prolonged gastric or bowel resection, which also speaks well for careful handling of tissues during surgery.

I am sure that this state of postoperative condition is preferable to the all-too-common nausea and vomiting of fifteen or twenty years ago, and I have experienced both degrees of appetite.

The muscle relaxing drugs are not without potential postoperative hazard. On several occasions, I have seen patients responding with good vital signs and even well oriented as to time, place, and person, only to relapse into marked dyspnea or apnea in the recovery room. This is a new postoperative hazard which was born with the use of muscle relaxing drugs. The explanation of its cause is not always clear. An example of this situation may help to demonstrate the condition.

A seventy-five year old male had "recovered completely" from anesthesia following a rather extensive bowel resection.

On the way to the recovery room from the Operating Suite, he had spoken about the weather, asked when he could eat, and requested that we notify his wife that he was "feeling fine". He added parenthetically: "She worries about such things".

About ten minutes after his arrival in the recovery room, I was called to see him. He was maniacal, dusky in color, and appeared to be writhing with pain. His pulse was rapid and irregular. The recovery room nurse said that this condition had been developing over a period of about three to five minutes.

Twenty years ago—or even less—the explanation might have been: "This man is in pain and he needs morphine". Unfortunately, this same explanation I fear, may be made on occasion even today.

Obviously, the cause for the mania, the irregular pulse, and the dusky color was hypoxia. In this case, the lack of the ability on the part of the patient to use available air or oxygen. In other words, he was not breathing adequately. Here a muscle relaxing drug was suspect but the cause for the delayed effect, after apparent recovery, was not evident.

Treatment of the condition was the intravenous administration of twenty (20) milligrams (2 cubic centimeters) of edrophonium (Tensilon Chloride®) given in 1cc doses of 10-mg each, three minutes apart. Fourtenths of a milligram of atropine was added to the second dose of edrophonium, to avoid any cholenergic side effects, such as bradycardia, intestinal cramps, perspiration and nausea. Oxygen was administered by positive pressure, by way of a replaced endotracheal tube, and later by nasal catheter. Recovery was abrupt, complete and, this time, lasting.

What caused this delayed period of diminished ventilation? I do not know, and I have not seen, or heard of any adequate explanation of this condition. The *important thing is* that the condition *must be recognized*, and *must be treated properly*.

And—*proper treatment is not morphine* or any morphine substitute.

Hypoxia is the most common cause of postoperative mania, as seen in the recovery room. This can be treated, usually quite adequately, with the administration of oxygen, by face mask or nasal catheter. Occasionally the replacing of an endotracheal tube may be necessary, to give clear passage of oxygen to the lungs and carbon dioxide and other gases or vapors from the lungs.

Incidentally, if anyone is going to administer anesthesia in *any* form it is *absolutely essential* that he, *or she*, be adept at passing endotrachael tubes. There is absolutely *no place* and *no excuse* in American medicine today, for anyone to be administering these potent drugs, called anesthetics, who cannot pass an endotrachael tube.

The *only* exception to this can be when an individual is in his or her training period, and that period of actual clinical training in anesthesia technology should be a minimum of eighteen months, or preferably two years.

One of the first things we teach our student nurse anesthetists to do is to pass endotracheal tubes. Recently, I checked the records of one of our student nurse anesthetists, who has not yet finished her second year of anesthesia training. To date, she has passed one hundred seventy-six endotracheal tubes and, in case anyone is wondering, we do not do all procedures with the use of tubes.

I would like to see every full-time worker in recovery rooms be adept at passing endotracheal tubes as well as doing venipunctures.

The *sine quo non* of many surgical accomplishments has been an endotracheal tube passed, or an intravenous infusion started, in the "nick of time". You, or your assistants may not get proper credit for having done this, at certain critical times, but the science of anesthesiology will, and that is the important thing.

Speaking of intravenous infusions-learn how to put a needle in a vein, *and* how to keep it there. This may seem a ridiculous request to most of you, but I have seen many nurses practicing in the technical aspects of anesthesiology, who know nothing about putting needles in veins. That is, they do not know how to do a venipuncture. I must add, that this lack of technique is not limited to the anesthesia nursing profession. There are many *physicians*, mostly outside the field of anesthesiology, who cannot do a respectable venipuncture. By "respectable", I mean relatively painless, completely effective *and* lasting.

For the past twenty years, I have made it a routine practice to start an intravenous infusion on every patient who is to receive general, or spinal, anesthesia. It has always been my belief that the best time to do a venipuncture is when one can find a vein. Do not wait until you need it before starting an infusion. Then it *may* be too late.

Always use an 18 gauge needle, or larger, when starting an infusion on a patient who is about to have surgery. Your patient is then prepared to receive practically anything—including blood—should he need it, in the operative or postoperative period.

How many times have patients been returned to your recovery room with a bottle of blood attached, but not running? This failure of the blood to run may be due to a plugged needle—especially if the needle happened to be a small gauge—but it may also be due to spasm of the vein concerned.

Most blood that is given nowadays comes directly from the blood bank, and the more urgent the need, the colder the blood. This coldness frequently causes spasm of the vein, thereby preventing free flow of the blood. If one or two cubic centimeters of 1 per cent procaine are injected into the needle, this spasm will frequently disappear. Sometimes, it may be beneficial to constrict the vein proximally, for a few seconds, in order that the procaine may remain in contact with the intima of the vein near the needle.

I have never seen *any* ill effects from this procedure in the postoperative period, which might conceivably take place in a patient who happened to be hypersensitive to procaine. Should you happen to produce a convulsion, a few milligrams of pentobarbital or thiopental, given by the same vein will stop it. Should a marked syncope develop, it could be dispelled with a few milligrams of ephedrine, also given by this same vein.

Incidentally, should you have reason to believe that this needle concerned were out of the vein and in the tissues, then by all means, inject a little 1 per cent procaine. This will cause local vasodilatation in tissues surrounding the needle, thereby preventing the patient from having a sore arm. The pain and possible slough of tissues, caused sometimes by the inadvertent extravascular injection of thiopental, can be prevented by the infiltration of procaine in the area concerned.

When a patient is returned to the recovery room, or his own bed, in case your hospital does not happen to have a recovery room—and you see evidence which leads you to believe that the patient has lost a tooth—or two—very recently, *be sure you know where that tooth is,* or those teeth are. I *am not* referring to patients who are primarily dental cases.

Intentional removal of a loose tooth during surgery, even if it should be a large front tooth, such as an incisor, is necessary sometimes in order to avoid the possibility of its aspiration in the recovery period. Of course, before receiving preoperative medications, the patient should be forewarned of the need for removing the tooth. But, as long as people are going to be working with people, someone is sure to forget; therefore, have the tooth available, in order to explain to the patient when he recovers. Regardless of the conditions concerned, in the removal of the tooth or teeth, it is very definitely a potential postoperative hazard to have an empty space in an alveolar process and not know where the natural occupant of this space is.

The tooth, crown, pivot, or whatever the removed object may be called, must be saved to show to the patient, and, if the patient happens to be a child, you better have a gift handy, in order to be ready to play the role of the good fairy! And here, a word of warning—do not leave any coin, such as a dime, under the child's pillow. A coin in the esophagus is just as dangerous as a tooth in the trachea!

Perhaps we should not spend so much time on this tooth hazard, but the loss of a tooth may evoke more mental, if not real physical anguish, than an irregular mid-line abdominal scar. Remember, the average American woman is more concerned about the appearance of her mouth than she is about the appearance of her abdomen and, in spite of the predicted trend, I do not think Dior is going to change things very much!

The patient who has received thiopental (Pentothal®), as his primary anesthetic may occasionally develop in the postoperative period, a condition commonly called "pentothal-shakes". This is a form of exaggerated chill. It may be treated by covering the patient with warm blankets and the intravenous administration of an antihistamine. If this treatment is not effective, slow intravenous injection of 3 or 4 milligrams or apomorphine *will* be effective. Apomorphine is a very potent drug and, in my experience, should be reserved for only the treatment of this complication.

Prolonged sleep, from overdosage, or idiosyncrasy, following thiopenthal or other barbiturate anesthesia should be treated like any other type of barbiturate poisoning. After all, intravenous anesthesia, considering the most common drugs being used, is nothing more or less than controlled barbiturate poisoning, although I can think of some professional people who might take offense at this term.

As with any barbiturate poisoning, vital signs must be maintained. Maintenance of an adequate and *busy* airway is essential. Blood pressure must be kept near normal, by intravenous infusions, as needed. Tracheal toilet is absolutely essential. The position of the patient must be changed frequently. If the depressed condition is prolonged, antibiotic drugs should be used.

Analeptic drugs are of questionable value. If any drug is to be used, sodium succinate is the least noxious and will often produce surprising respiratory stimulation, when given intravenously as a 5 or 10 per cent solution in 5 per cent glucose and water, by the continuous drip method. The cerebral stimulating agents should be avoided, because of their dangerous potentialities.

Morphine and meperidine depression may be treated with N-allylnormorphine—a specific for morphine poisoning. I shall not go into the technic of treatment of this condition, because it is well known to most of you, and its indications for use are readily available to all.

The known or unknown asthmatic may present a peculiar problem in the postoperative period. I have seen both known and unknown asthmatics go through a prolonged surgical procedure, with perfectly smooth thiopental-nitrous oxide-oxygen sequence anesthesia, only to develop an asthmatic paroxysm during the recovery period. The availability of aminophylline, epinephrine, helium and other antiasthmatic drugs, as well as good old ethyl ether is essential for just such eventualities.

It is unwise to use parasympatheticomimetic drugs, such as thiopental, cyclopropane and curare, on the asthmatic patient; however, I am sure it is done sometimes—knowingly or otherwise.

These patients usually do very well with a combination of nitrous oxide, oxygen and succinylcholine on a nonrebreathing technic. The combination of ethyl ether, oxygen and succinylcholine, or simply ether and oxygen is also usually effective and practical. On a few occasions, I have reanesthetized asthmatic patients with ethyl ether in the recovery room. The tracheo-bronchial tree could then be cleaned, by mechanical aspiration, and secondary recovery was uneventful.

One of the great potential hazards in the postoperative period is the use of *analgesics*, or narcotics, for the relief of pain. The initial dose of narcotic, during the recovery period, should be far *below* that normally indicated *after* recovery is complete.

Four or five milligrams of morphine will be very effective in the responding, robust male, when the 10 or 15 milligrams that he would require later might prove to be an overdose in this period. Remember, morphine, *in man*, is a respiratory depressant. When that initial postoperative pain has been allayed with morphine, any remaining morphine in the system, not necessary for analgesia, will depress respirations. Therefore, give just enough to relieve pain.

One of the best analgesics for this early postoperative period is intravenous alcohol. It is readily available in 5% solution with 5% glucose. It produces not only good analgesia and euphoria but also nutrition. It may prevent an attack of delerium in the chronic alcoholic. It will make the recovery room stay of the teetotaler a happy memory—or complete amnesia.

Five per cent alcohol may sound like a very weak intravenous cocktail, but let's analyze it. There are 50 cc's of absolute alcohol in a liter. That is 50cc's of 200 proof, or the equivalent of 100cc's of 100 proof. Most of the common alcoholic beverages run about 70 to 85 proof. Therefore, we would have about 150cc's of 70 proof. Now, if we consider a jigger to be one ounce, or 30cc's, we have about five or six good sized martinis. That's enough for anyone to take in an hour or two.

It is my impression that, in the United States today, the morphine substitutes such as meperidine and methadone, especially the former, are used far more widely than morphine. I would like to know why. *Do not* let *anyone* tell you that these morphine substitutes are *not* respiratory depressants. Most of them do not produce euphoria, a state of mind which I consider especially beneficial where pain and fear are apt to be present. From the purely economic standpoint, certainly the substitutes are far more expensive than morphine itself.Granted, morphine will cause nausea, and even vomiting in some patients, but so will meperidine. As a narcotic analgesic, I believe that morphine has no consistent equal. Actually, the wide use of morphine substitutes, in place of morphine itself, is probably due to habit. It became a habit, ten or fifteen years ago, with good reason, and we have never gotten over it.

Whether you use morphine, or a substitute, in the immediate postoperative period, use them sparingly, or you may have an added hazard with which to cope, and do not forget alcohol.

For the past several months, I have been using hi-fidelity produced background music in our recovery room, as well as during induction of anesthesia, and throughout operative procedures. Empirically, I can say it has been very successful with patients, as well as operating room personnel. I shall have more to say about music and anesthesia at a later date.

Conclusion

I know I have not mentioned *all* of the possible postoperative hazards, but I have *tried* to touch on the more common ones. I would like to leave you with these requests, regarding the care of your postoperative patients. Keep an open and *busy* airway. Keep the blood pressure as near the preoperative normal as possible. Keep your patients relatively free from pain. Above all, in the care of the postoperative patient, keep your eyes open, your brain alert and never hesitate to request help from anyone, whether it be the chief of staff or the doorman.

William S. Halsted, Master Surgeon

John Edward Manning, M.D.*
Saginaw, Michigan

History is to most people an anathema. It denotes vague dates, time clouded events and dust enshrouded places all better left undisturbed so that we can better pursue our fetish of being modern. This feeling stems, I think, from the fact that so much history, political and geographical, seems to tie very vaguely with the present and a lack of interest in that which affects us little is easily understood.

Medical history pretty much falls into the same category—we have heard names like Semmelweis, Leeuwenhoek, Welch, Hunter, Lister, and others equally famous and yet most of us have trouble fitting them in; we feel vaguely uneasy at our inability to place them accurately in their proper perspective. We know they contributed greatly and we feel a little guilty at our ignorance or at not having taken the trouble to find out. I say this not in an accusing tone, at all, but as a fellow history fumbler.

However, medicine as we know it and practice it today is only the sum total of the contributions of the people who have gone before us. These additions, some great, mostly small, go back over the centuries to the eons before Christ; to Egypt 2000 years before Hippocrates and to all the years since. However, the golden years began in the middle of the last century, scarcely 100 years ago. We are very fortunate to be living so close to these times and to have them so well recorded.

As a sophomore medical student, I found that it was possible to leave the pathology laboratory and by going through tunnels to adjacent Lakeside Hospital and thence, by elevator, to arrive at the operating suite where I many times watched that master surgeon Claude Beck at work. Dr. Beck was and is a meticulous craftsman and watching him and at other times listening to his lectures brought me a curiosity re. the "Halstedian concept", the "Halstedian principles" and a curiosity regarding Dr. Halsted himself.

I learned that Dr. Halsted had been the first professor of surgery at Johns Hopkins Medical School and that he held that position from 1889 until his death in 1922. I learned, too, that he influenced American surgery more than any other man. As I have learned more and more about Dr. Halsted, he and his unbelievable influence upon all of us connected in any way with surgery have impressed me tremendously. As I became intrigued with this fabulous surgeon, I unconsciously learned many things which in one way and another affected his

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Address before the Tri State Assembly of Nurse Anesthetists meeting, April 29, 1957.
*Chief of Surgical Division of Saginaw General Hospital.

career. Innocently and unsuspectingly, I found myself absorbing, entranced, a rich portion of medical history. I am a surgeon, not a historian or pedant and I was, frankly, amazed that the story unfolded was fascinating and it is not history that I come to tell you today so much as a story of people, odd coincidences and particularly, that of one man, Dr. Halsted, in the hope that you, too, will find it giving you more appreciation of so much we have today.

Dr. Halsted and his times are more interesting when seen in light of some background and I think it is worthwhile to set the historical stage.

It is hard to imagine anything that would have less effect on American medicine than the decision of the Society of Friends, commonly known as Quakers, in 1807, to free their slaves.

Samuel Hopkins and his wife, Hannah, were prosperous plantation owners in Anne Arundel County, Maryland where their broad acres cultivated by their many slaves grew fine tobacco. The Hopkins were Quakers and in obedience to the decree of their church, in 1807, freed their slaves and slipped rapidly from prosperity to far less fortunate circumstances due to the inability of the family alone to do the farm work. It soon became apparent that the plantation could not support their family of 11 and so in 1812 at the age of 17 the second son, Johns, was sent to Baltimore to work for his uncle, a wholesale grocer. Johns was an apt pupil and hard worker but left his uncle's household and employ when the latter refused to allow his daughter, Elizabeth, to marry him because the Society of Friends objected strongly to the marriage of first cousins and Johns was not able to persuade his uncle to relent. Neither Johns or the lady concerned ever married. Johns Hopkins' business ventures prospered and he become a very wealthy man but having no family to leave his fortune to, two philanthropic institutions eventually became his sole heirs, when in 1867 two corporations were formed "The Johns Hopkins Hospital" and "The Johns Hopkins University". Thus, what unexpected results from two Quaker rulings; one regarding slaves in 1807 and one regarding love and marriage.

Johns Hopkins was amassing his fortune and giving long and careful thought as to its ultimate disposition at exactly the same time that medicine and surgery were at their period of greatest progress.

Let us review for a moment why medicine had progressed not at all for centuries and why there was not any surgery worthy of the name as recently as 100 years ago. Let us think again of the days, months, years and centuries of mankind's suffering all to be changed in a wink of time between 1850 and 1900.

The reasons why surgery had stood still for these eons are quite simple:

(1) Surgery was painful for there was no anesthesia.

(2) Surgery was highly dangerous and usually fatal for there was no conception of the cause of wound infection and wounds were practically 100% purulent and toxic.

The two, above, combined to make surgery so narrow a field that it had very little to contribute to health in general.

The decisive step against pain was taken in 1846 when the famous trial operation under ether was done at

the Massachusetts General Hospital by the Boston surgeon, John Collins Warren, and was a full success.

The various forms of local anesthesia did not come for almost 40 years. It is unnecessary, particularly with this audience, to elaborate on the extraordinary value of anesthesia and the great changes it brought about in all branches of surgery including that of physiological experimentation.

As far as wound infection is concerned, the history of modern asepsis begins on a tragic note and with a tragic figure. Almost a generation before the triumph of modern surgery Ignaz Semmelweis discovered the clue to puerperal or childbed infection. While he laid this gift at the feet of the medical world, he was only laughed at and seeing thousands and thousands of mothers continue to die needlessly because of the stupid and costly conservatism of his colleagues ultimately clouded his mind and he died in 1865 in an insane asylum, ironically enough, of sepsis. It was left for the chemist, Pasteur, in his experiments for the wine industry of France to establish in 1862 the fact that bacteria caused infection and disease. By 1867, when he began publishing, Joseph Lister's antiseptic principles showed amazing results in surgical wounds. With Lister, the days of "laudable pus" came to an end and perhaps the greatest forward step had been taken. So, with pain and sepsis finally conquered it becomes apparent that the stage was set for great happenings in all fields of biological science and in surgery particularly.

While the above was going on two more souls entered the world destined to carry the torch still further; William Welch, born in 1850, was destined to be the guiding spirit of the academic climate of the Hopkins and, indeed, of American biological science, from 1884 until his death in 1934 (a few months less than full 50 years) and the man who is the primary object of our study and for whom the previous background has been established, William Stewart Halsted, was born on the 23rd of September, 1852 in New York City.

William Halsted was born of wealthy parents and was financially independent all of his life. This, by relieving him of many of life's ordinary pressures undoubtedly contributed greatly to the work he was to do.

Dr. Halsted graduated from Yale in 1874 and to those of us who are less than outstanding scholars, courage may be taken from the fact that his 4 years at Yale were academically undistinguished for he gave himself up to athletics and a gay social life. Some medical reading done in his senior year apparently caused him to consider medicine and he entered the College of Physicians and Surgeons (now part of Columbia University) from which he graduated in 1877. He interned on the Fourth Surgical Division at Bellevue Hospital which is still a New York City hospital.

It was at about this time Lister visited this country and his antiseptic technique was enthusiastically adopted by the Second Surgical Division of Bellevue but not by the others and thus Dr. Halsted was able to observe in the same hospital the results obtained with and without Lister's methods. Even in the best hospitals, trained nurses with long sleeves and unwashed hands passed and held dry sponges and, ligatures were common-

ly held in the mouth of the intern. Instruments were seldom sufficiently cleaned and the preparation of the catgut was left to the intern or the apothecary and was unsterile and usually improperly done.

The study of this period of Dr. Halsted's life in New York suggests the opportunities afforded the young surgeon with good training and an investigative turn of mind to make important contributions to surgery. Here was the whole field of surgical technique awaiting development; safe, curative operations to be devised, anesthesiology to be extended and perfected (bear in mind there was no such thing as local anesthesia in 1877) as well as many other challenges to an active mind.

Dr. Halsted spent 2 years on the Continent from autumn, 1878 to autumn, 1880 and the impressions gained and acquaintances made during this period influenced him all of his life. This was during the period of Germany's supremacy in medicine and its related subjects. The surgeons whom Dr. Halsted met and under whom he worked included such famous men as Bilroth, Woelfler, von Mikulicz, von Bergman, Thiersch, Volkman, and Esmarck. These are, of course, some of the greatest and most immortal names in surgical history. These and others in related fields of histology, eye and ear, etc., were men of tremendous power and ability, many of them the driving and organizing forces of the great continental clinics of the time. Certainly, these men must have stimulated greatly Dr. Halsted's already stirring interest in scientific surgery and teaching and he returned to New York in the fall of 1880, young, healthy and eager to put into practice the many things learned abroad as well as ideas of his own.

The next 5 years, 1880 to 1885, are Dr. Halsted's "New York Period" and are particularly interesting in contrast to the remainder of his life. During these 5 years Dr. Halsted's activity was tremendous and his work as a young surgeon prodigious. He early assumed a Service at Roosevelt Hospital and was soon entrusted with the purchase of instruments. At one time he ordered 12 hemostats from Europe and his Chief's amused question was "Whatever will we do with so many?" No hospital in New York at that time had more than 6 hemostats. He worked in Anatomy and organized a very popular group "The Quiz Group", and odd practice of the time, in which medical students joined a quiz group paying usually $100 fee for teaching outside their own medical schools in order that they could pass the school's examinations. This, of course, indicates the type of instruction then available in the schools and Dr. Halsted's quiz was so well organized and taught that the students largely abandoned the lectures of their own colleges.

Dr. Halsted was at this time a bold, daring and original surgeon and an outstanding anatomist. He was tremendously busy with appointments to the staffs of many hospitals, including Charity Hospital and Emigrant Hospital on Ward's Island; these, incidentally being visited at night because his days were so full. He was appointed to the staff at Bellevue and being unable there to carry out the proper technique in the operating rooms, had erected on the grounds of that institution a $10,000 tent, supplied with hot and cold water

and gas, to serve as his private operating room. Dr. Halsted stated that he built the tent because he "found it impossible to carry out antiseptic precautions in the general amphitheater of Bellevue where the numerous anti-Lister surgeons dominated and predominated" (this from a letter written to Dr. Rudolph Matas in 1921). Other hospital appointments and many other professional activities indicate that for one in his early 30's, here was no ordinary man. During this time he also did work with blood refusion and transfusion that laid groundwork for far broader work in blood transfusing. It is interesting to know that this work was begun because of the numerous cases of illuminating gas poisoning seen in New York at that time. It seems that many overnight boat runs from areas surrounding New York, such as Long Island Sound, etc., carried passengers from the hinterlands who were unaccustomed to gas lights. When these innocents prepared to retire for the night they blew out the gas rather than turning it off with the result that many of them were found unconscious in their beds upon arrival in New York in the morning. It was in an effort to oxygenate the blood of these people that small amounts were withdrawn by Dr. Halsted, stirred so as to oxygenate them and refused into the patient. In light of present day knowledge it does not seem that the amounts used were significant but the concept was basic and undoubtedly contributed to later ideas regarding the actual transfusing of blood therapeutically.

During this period of 1882 to 1886, he presented or published 21 papers, the majority not different from what any young surgeon might present, but several included very basic concepts and his papers on cocaine anesthesia, published during this period, were epoch making and must be considered among his greatest contributions to surgery.

It is appropriate at this time to discuss Dr. Halsted's connection with local anesthesia and its amazing ultimate effects upon him and his life.

In September, 1884, Koller announced at Heidelberg Ophthalmic Congress that the newly discovered drug, cocaine, would render insensitive the conjunctiva and cornea of the eye. Within a week or two, at most, of the arrival in this country of Koller's paper, Dr. Halsted and the students in his Quiz began active experimentation with this drug to test its value as a local anesthetic for surgical operations. With it they produced nerve blocks for the first time and used it also for the first time in dental work. They discovered the basic fact that if a nerve is injected with cocaine all the area distal to the site of injection becomes anesthetized. Much controversy surrounded this work for years and it was not settled until April, 1922, a few months before Dr. Halsted's death. As the result of a tremendous amount of research on the part of Dentists headed by Dr. Kell of New Orleans, it was proven beyond doubt that the world owed the discovery of conduction anesthesia or nerve blocking to Dr. Halsted.

It is well known that Dr. Halsted and three of his colleagues became addicted to cocaine in all innocence in that none of them realized the drug was habit-forming. The other three who acquired the cocaine habit died without recovering from it and Dr. Halsted's health was undermined to

the point that his work was stopped, his practice given up and his New York Period ended by the drug habit in 1885.

Here we have a young man, at the peak of health and activity, at the age of 34 having his life shattered by an innocent addiction. For the following 2 years he was in and out of hospitals and endured all the sufferings that only an addict can. In December of 1886, when all others had given up hope of his ever being useful again, Dr. William Welch whom he had known in New York and who was by this time established as the Professor of Pathology of the Johns Hopkins Medical School invited Dr. Halsted to join him in Baltimore. After this, Dr. Halsted was forced once more to return to the hospital but it would appear that after this by superhuman effort he once and for all broke the cocaine habit. There has been considerable discussion through the years as to whether or not he mastered the habit and there are those who claim that he continued to take cocaine for the rest of his life. Without belaboring the point further, I believe that it can very safely be said that he did, indeed, once and for all break the addiction. Dr. Halsted was the only man among the early cocaine addicts to go on to a more brilliant career than before and the end of 1887 finds him permanently settled in Baltimore.

It has been said that most of him died in the process of breaking the addiction, and he was now a new man; withdrawn, with a wary look, all the fire in him deliberately covered over by a sheet of ice, slow moving beyond all endurance, tired, courteous and infinitely patient—these are the characteristics that marked the Dr. Halsted who was to exercise his great genius in Baltimore for the following 36 years.

In attempting to estimate the significance of Dr. Halsted's work and influence is not so much his surgical discoveries and inventions that live through the years, many and important as these were, as his general attitude toward surgery that is to be carefully considered.

At a time when surgeons' ability was largely measured by their speed, Dr. Halsted founded the school of slow and careful surgery. He found that mechanical injury to tissues made them much more vulnerable to bacterial invasion and this was the key to the whole situation in his mind, and his entire surgery was marked by extreme consideration of tissues and it was his endeavor in his operative procedures to do nothing to weaken or obstruct the natural defenses. In addition, by careful attention to the precise bringing together of tissues which had been separated he tried to return the normal architecture and thus to as near as possible restore the function. This, then, is the principle that Dr. Halsted gave to surgery and which exists intact today and which most impressed those visiting his Clinic and is essentially, to operate with the utmost respect for the integrity and nutrition of the tissues, to be extremely careful to stop hemorrhage from all tiny severed blood vessels and to preserve so far as possible the blood supply of all tissues and to protect them from injury; in short, careful and gentle handling of all tissues. Dr. Halsted established the school of safety in surgery. He demonstrated that an operation lasting 3 or even 4 hours did little harm

to the patient if the aforementioned principles were utilized. He was painstaking and delicate in his handling of the tissues and to the artistic finish of his handicraft. There has been no advance in surgical techniques since his time but rather a relaxation from his extreme precision. From the fountainhead at Baltimore, Dr. Halsted's methods slowly seeped through the country and primarily, the word was spread by the men he trained and who ultimately became teachers.

If the measure of a man's contributions can be taken by what of his we still use today surgically, then we must review in short what Dr. Halsted introduced that we still do. It is found that the list is entirely too long to cover but a few examples can be given.

It was he who introduced thin rubber tissue (then called gutta-percha) as a dressing for wounds and as a drainage material; he created local anesthesia, he did basic studies on intestinal anastomosis, he described, in 1889, a radical operation for the cure of cancer of the breast which up until that time was a rarely cured disease. This operation is used in his identical method today. In 1890 he introduced the use of rubber gloves, primarily to protect the hands of his surgical nurse and in the same year, devised an operation for the cure of inguinal hernia, an affliction regarded until then as almost incurable. It is needless to say that this operation is done thousands of times every week today. In 1893 he opened the common bile duct three times, the first that this was done in America. In 1896 he performed the first excision of cancer of the ampulla of Vater, transplanting successfully the common bile duct into the duodenum. In 1903 he devised the buried plate and screw method for the treatment of fractures and he wrote many monographs on diseases of the thyroid and surgery of the great arteries. These are only a few of the things that Dr. Halsted did which are used every day and without which surgery would be an entirely different proposition than it is. There can be no question that no other man ever introduced so many things into so widely practiced an art and in so short a time, as did he.

Interpreting a man's contributions to surgery or to any other science is enhanced by knowing something of the man personally. Certainly, Dr. Halsted is interesting enough in this direction also. In 1890 he married the Operating Room Supervisor, Caroline Hampton, and they lived in the same home in Baltimore throughout their entire married lives. Many interesting tales can be told about their method of living such as the fact that neither one cared for furnace heat and both lived entirely by fireplace heat. It is interesting to note that the Halsteds entertained at dinner parties, occasionally, early in their married life but that Dr. Halsted's extreme meticulousness with detail was brought to a fine pitch by these dinners.

Among other things, he could not tolerate folds in the table linen, and the linen which was of the finest, had to be placed upon the table and ironed there. He personally selected the coffee beans for the after dinner coffee which he brewed and it is said that after several cups of this coffee sleep was impossible. All details of the dinners were supervised by Dr. Halsted and it is amusing to note that after these dinners Mrs. Halsted

began to develop severe migraine headaches and the dinners were largely discontinued. Dr. Halsted was as meticulous in his dress as he was in his surgery and had dozens of suits made in London. His shoes were made in Paris and he, himself, selected the spot on the calfskin from which the shoes were cut. His shirts were made in Paris and like some of the Russian aristocracy before 1914, he regularly sent his shirts to be laundered by Charvet in Paris, and he was very pleased when in later life he found a small laundry in Baltimore which could adequately launder his shirts. Dr. Halsted used his wealth well, I think, in not allowing himself to be overwhelmed by the administrative detail of running a large department. It is said that he spent his life in Baltimore avoiding students, colleagues, and patients and many rumors sprang up around this strange man. He had a large library in his home and with two and sometimes three secretaries to help him in his research and articles he was able to do the majority of his work within the confines of his home. It was his habit to leave Baltimore for 3 months in the summer usually going to Europe for a while and then later to his summer home in Cashiers, North Carolina.

It was Dr. Osler, the Professor of Medicine at the Hopkins who conceived the idea of having a resident physician to fill the gap between the intern and the staff man when the Hopkins was founded. This developed of course into the first advanced training program for physicians and was adopted at once by the Surgical Department. Up until the time of Dr. Halsted's residents, there was no source of surgeons trained in the higher types of surgery and the professors around the country were always surgical practitioners with large practices and in most instances, no concept of true teaching or research. Thus, the surgical resident on Dr. Halsted's Service was appointed for no particular period as we know it now but frequently remained as the resident for 3 or 4 years. The longest time was that of Dr. Bloodgood who remained as the chief surgical resident for 5 years. The residents had tremendous power and responsibility and were, in fact, in charge of the Surgical Service.

In summary, we have reviewed the background and the extreme recentness of modern surgery. We have seen how a series of remarkable coincidences and remarkable men have given us tremendous advantages and safeguards to life today.

These men brought surgery from the supernatural and the crude business of no anesthesia and laudable pus to a reasonably exact science in a very short time. They have, more importantly, imbued all practitioners of the art with a scientific approach to the problem and as Elliot C. Cutler said, "In modern times, surgery practiced by the hands but without a knowledge of anatomy, physiology and bacteriology would not be tolerated." This is largely due, in this country, to the influence of that ever fascinating man, Dr. William Stewart Halsted. His tenacity of purpose, his unswerving devotion to his work and the example he set with his meticulous and careful surgery, careful living, and intelligent use of his time and uncluttered thinking can well serve as an example to all of us in medicine today whatever our particular field of endeavor.

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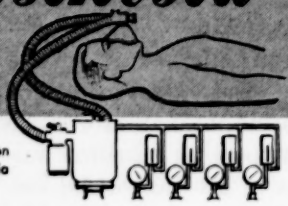


"an anesthesia classic" . . .

A New Method for The Production of General Analgesia and Anaesthesia With A Description of The Apparatus Used

* By D. E. Jackson, M.D., Ph.D.

IN the following paragraphs there will be described a method for the production and maintenance of prolonged general analgesia or anaesthesia. The method involves a continuous process of rebreathing of the gaseous or volatized anaesthetics from which the exhaled carbon dioxide, etc., have been removed and to which oxygen is constantly added in proportions suitable to maintain the patient in a satisfactory condition.

So far, I have had an opportunity to try this method only on animals, but there seems to be good reason to expect that in man, results entirely comparable to those produced in animals may be readily obtainable.

Regnault and Rieset were probably the first to pass a current of oxygen into a small chamber in which an animal was confined for the purpose of analyzing the changes produced in the air by the respiration of the animal. They used a strong alkaline hydroxide solution to absorb the carbon dioxide output of the animal. Oxygen was added from a constant pressure reservoir. These principles have been used by practically all workers on respiratory metabolism since 1849.

In the present experiments I have utilized them not for the purpose of obtaining data regarding the metabolism of the animal, but with the object of maintaining conditions suitable for the normal respiration of the animal. At the same time, added to the respiratory medium are such quantities of gaseous or volatile anaesthetics as may be necessary to produce and maintain any desired and attainable degree of analgesia or anesthesia, depending on the pharmacological properties of the substance administered.

A small electric motor operates an air pump. By means of a closed system of tubes and vessels, air may be kept continually circulating through the apparatus without either loss or gain of air except at the instance of the operator. Carbon dioxide is taken up by soda-lime while watery vapor is taken up by sulphuric acid. Oxygen must be replaced from the outside, and is injected from an ordinary commercial oxygen tank into the air circuit.

So far I have successfully used nitrous oxide, ether, chloroform, ethyl chloride, and the proprietary preparation "somnoform."

It is one of the basic principles of pharmacology that most anaesthetic substances which are administered through the lungs by inhalation are almost totally excreted again by exhalation from the lungs. By means of the constant circulation of the air within the machine, the exhaled anaesthetic is simply carried around, washed through the sulphuric acid and sodium hydrate solution and again returned to the animal for rebreathing.

It is thus seen that so long as no air is allowed to enter the machine from without and none is allowed to escape from within, the concentration of any given anaesthetic vapor within the machine and in the tissues of the animal must remain practically constant. Consequently the degree of anaesthesia should also remain constant.

The duration of anaesthesia by this method is usually limited only by the convenience or desire of the operator. With nitrous oxide, I have been easily able to keep dogs anesthetized for periods of time extending up to a little more than five and one-half hours, and the animals are in excellent condition at the close of the anaesthesia. With ethyl chloride, one and one-half hours is the longest time I have so far tried to keep an animal anaesthetized. With ether or chloroform, the duration of the anaesthesia may be regulated entirely by the desire of the anesthetist.

A more comprehensive condensed version of this "classic" prepared by William H. L. Dornette, M.D., appeared in the December '57 issue of our quarterly bulletin, "Anesthesia Items." Copies available upon request.

DEVELOPMENT OF THE KINET-O-METER®

Just prior to the publication of Dr. Jackson's article, Dr. Jay A. Heidbrink introduced a gas machine primarily for use in dental surgery that produced anesthesia using a mixture of nitrous oxide and oxygen. His first units proportioned the gases to deliver the preset percentages. The technique most popular at that time was to administer to the patient a mixture of 93% nitrous oxide and 7% oxygen for a period of one minute to induce the first stages of analgesia. Pure nitrous oxide for a maximum of 40 seconds was administered to produce deep planes of anesthesia, and maintenance of the patient was then accomplished with 90 to 93 percent nitrous oxide and 7 to 10 percent oxygen.

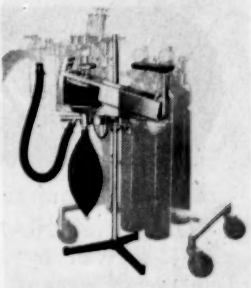
Along about 1928, Dr. Heidbrink, in cooperation with Dr. John F. Lundy of the Mayo Clinic, designed the first gas machine to meet the specific requirements of surgical anesthesia. Known as the Lundy-Rochester model, it permitted the administration of nitrous oxide, ethylene, oxygen and carbon dioxide. This new model measured the gases being administered with the use of the Bourdon Gauge and a flow orifice rather than just proportioning the gases.

In 1933 the first Kinet-o-meter was introduced. Improved techniques, new anesthetics and the introduction of the carbon dioxide absorber required a more accurate means of measuring the gases being administered. The Kinet-o-meter met this need for finer measurement and proved to have the greatest potential for accurate administration of inhalation anesthetic agents. This has been demonstrated through the years with the development of the "Series 1000" Kinet-o-meter and the recently introduced "Series 2000." This new model Kinet-o-meter incorporates 11" hand-calibrated flowmeters providing unmatched accuracy, and the "VERNI-TROL" Vaporizer to provide high concentrations of ether vapor.

Information may be had on the "Series 1000" by requesting Form 4689 and on the "Series 2000" by requesting Form 4756.

APPLICATION OF ETSTEN VENTILATOR

A delicate circulatory operation was performed at the New England Center Hospital last September and reported in the September 26 edition of the *Boston Evening American*. Diagnosed as an aneurysm of the ascending aorta, it had to be removed and the artery sutured. The patient was put into a state of hypothermia in which his temperature was lowered to 87°F. His complete breathing function was taken over for 18 hours using the Etsten Ventilator, operated by its originator, Dr. Benjamin Etsten, head of the Department of Anesthesia, assisted by Dr. John H. Hopika. The succcessful operation was performed by Drs. Harold F. Rheinlander and Allen D. Callow, surgeons.



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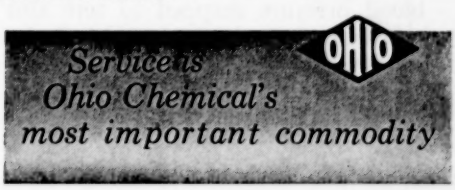
**The fourth "classic" on anesthesia apparatus by Dr. D. E. Jackson appeared in the October, 1915 issue of the Journal of Laboratory and Clinical Medicine.*



Notes and Case Reports

On August 20, 1957, the patient, Z. J. arrived by ambulance in the emergency room of the Mobile County Hospital. His condition was critical, in apparent shock, with a gunshot wound of the right upper thorax. He was diagnosed as a gunshot perforation of the heart. The physicians immediately performed a cut down in the left ankle and started a glucose infusion. A type and cross match was done and a blood transfusion was then started as soon as the blood was available. When the patient's blood pressure rose to 100 systolic, he was prepared to go to surgery. Upon arrival in the operating room his blood pressure was 110/70. Another infusion was started with a wide bore cannula in the left arm and 250 mgm. of Sodium Pentothal®, followed by 25 mgm. of Succinycholine Chloride was injected. An oral endotracheal tube was then inserted and the cuff expanded. The blood pressure was 100/70 and dropped over a period of twenty minutes to 70 systolic at which time blood was started in the infusion in the left arm. The right chest was opened and free blood suctioned out. Respiratory assistance started with the opening of the pleura and continued constantly until the chest was closed at the end of the case. For better visualization of the wound, the surgeons incised the sternum and entered the left chest laying the entire thorax open. The patient's blood pressure dropped to zero and remained for seven minutes, all the while blood was being pumped into both infusions. The free blood in both lung fields was suctioned clear and the surgeon used his fingers to tamponade the perforations of the right auricle and ventricle. Levophed 10-cc was added to 500cc of 5% Glucose in Normal Saline solution and was added to one of the infusions and allowed to drip as rapidly as possible while blood was being pumped into the other infusion. When the patient's blood pressure rose to 70 systolic, repair of the perforation of the right ventricle was accomplished. The heart stopped beating and was massaged by the surgeon until the rhythm was restored. The perforation of the right auricle was then sutured and during this process the heart stopped beating three more times, fibrillating the last time, and being massaged by the surgeon until the normal sinus rhythm and rate had returned. The patient's blood pressure fluctuated between zero and 60 systolic with each halt and restoration. When the surgeon was satisfied with the repair, no leaks in the suture line were observed; the heart action was watched closely for several more minutes before the surgeon decided to close the chest. When it appeared that the heart would continue on its own and the patient's blood pressure had ascended to 90 systolic without the aid of Levophed, the ribs were approximated for closure. The pericardium was left open for allowance of cardiac hypertrophy. Two water traps were affixed one on either side of the chest and the surgery was completed.

A minimum of anesthetic agent was administered during the procedure.

Cyclopropane was given intermittenly until the first drop in the blood pressure was noted and then only oxygen was used until the patient showed signs of very light anesthesia at which time the chest was being closed and the blood pressure was normal at this time.

The patient was sent to the recovery room where his prognosis was thought to be grave. He reacted from the anesthesia and was talking and moving all of his extremities within thirty minutes post-operatively.

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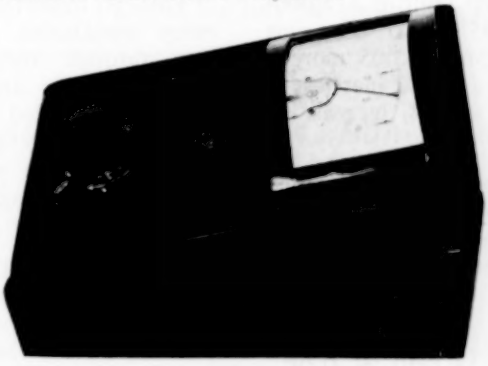

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Legislation

Emanuel Hayt, LLB., Counsel A.A.N.A.

Fall of Anesthetized Patient From Operating Table Found Fault of Surgeon

On July 16, 1953 plaintiff submitted to a medical operation in the defendant hospital in Colorado Springs. Plaintiff's attending physician and surgeon was Dr. Beadles. To administer the necessary anesthetic Dr. Beadles engaged the services of Dr. Bowles. After the plaintiff had been placed on the operating table and rendered unconscious by anesthesia, he fell to the floor and suffered serious injuries. Plaintiff some time later instituted an action for damages in the district court of El Paso county, alleging negligence on the part of all defendants, to wit, the surgeon, the anesthetist and the hospital.

At the time of the unfortunate accident in question there were at least four persons present in the operating room who were attendant upon the plaintiff, they being the surgeon, the anesthetist, a nurse and an orderly, the latter two being employees of the hospital. The danger of the unsecured patient falling from an operating table is one which was or should have been readily perceived. It is patently obvious, therefore, that someone present was negligent.

The evidence disclosed that the surgeon entered the operating room shortly after the plaintiff was rendered unconscious. At that time the surgeon instructed the orderly as to the proper position of the patient's body on the operating table, and further instructed that the plaintiff should be secured to the table by a strap.

Almost simultaneously then the surgeon turned to have his gown tied, the anesthetist started to make entries on a chart, the orderly left the room to get a strap, and the patient fell to the floor.

The surgeon contended that he was not negligent, and further, that if either the anesthetist or the hospital through its orderly were negligent, then the surgeon could not be held liable for such negligence.

The surgeon further argued that the anesthetist was in the nature of an independent contractor whose services were to be paid for by the patient, and that the orderly was an employee of the hospital over whom the surgeon exercised no control.

As a general statement of law this contention is not correct, said the court:

"If, however, the concurrent negligence of two or more persons combined results in an injury to a third person, they are jointly and severally liable and the injured person may recover from either or all. The concurring negligence of one is no excuse or defense to the other."

Irrespective of the doctrines of respondent superior or master-servant relationship, the surgeon owed a legal duty to his patient which he

failed to discharge, and such failure constituted the negligence found by the jury. In a case similar to the one at hand the Supreme Court of Oklahoma stated:

"The patient is helpless under the influence of anesthetic and absolutely at the mercy of surgeons performing the operation, and they are charged with the duty to see that no preventable injury results to their patient. Under the modern science of surgery a surgical operation, with modern hospital appointments, is a complex enterprise. Necessarily the various agencies that enter into it must be performed by different individuals, under the active supervision and direction of the operating surgeons in charge. If the operating surgeons were not made liable for the negligent performance of the duties of those working under them, the law in a large measure would fail in affording a means of redress for preventable injuries sustained from surgical operations." *Aderhold v. Bishop, 94 Okla. 203, 207, 221 Pac. 75*

At the conclusion of the trial before a jury a verdict in the sum of $10,757.45 was rendered against the surgeon. Verdicts pertaining to the anesthetist and the hospital relieved them of any liability.

(Beadles v. Metayka, 6CCH Neg. Cases 2d 645-Colo.)

The original decision was affirmed on appeal, with the following opinion by the appellate court.

The action for damages for personal injuries sustained by the plaintiff in a fall from an operating table in the defendant hospital in Colorado Springs. The plaintiff had submitted himself for surgery and his attending physician whom he had chosen to perform the operation was Dr. Beadles.

The plaintiff had been on his back after being administered the anesthetic, and the anesthetist Dr. Bowles was engaged in checking respiration, pulse and other related matters concerning the condition of the patient and making a record thereof. An orderly, whose name does not appear in the record, was at the foot of the operating table, and the anesthetist was at the patient's head. Dr. Beadles entered the room and, although not being fully gowned and requiring a nurse to tie his gown, gave orders to place the patient on his side, which the orderly proceeded to do. The orderly was holding the plaintiff by the hips in the position as directed when he was then told to "get a strap" or "strap the patient." Whereupon the surgeon turned to have his gown tied and the anesthetist turned her head and began making entries on the chart. The orderly left the side of the operating table to get the strap as directed. The patient then fell to the floor and was injured.

The jury returned a verdict in the sum of $10,757.45 against the surgeon. Verdicts in favor of the defendant Bowles and the defendant hospital were also returned by the jury. Dr. Beadles seeks reversal of the judgment against him.

Among the contentions of defendant Beadles, in addition to the assertion that he himself was not negligent, are: 1. That the patient was in charge of the anesthetist and the orderly when the accident occurred; 2. that the orderly was an employee of the hospital over whom the surgeon exercised no control, and 3. that the anesthetist was an independent con-

tractor whose services were paid for by the patient, and that if either the orderly or anesthetist or both were negligent he could not be held liable for such negligence. Defendant Beadles admits that as the chief surgeon he was in command during the operation, but contends that his responsibility did not begin until the start of the operation. Another contention is that under the doctrines of respondeat superior in the absence of a master-servant relationship, he cannot be held liable.

Under the evidence and under the instructions, the jury could have found all three defendants were negligent, and could have rendered a verdict against them jointly. On the other hand there was evidence that the anesthetist, under the prevalent practice, had the duty of making the chart entries and of necessity would have to divert her attention from the patient. There is evidence in the record that the orderly was acting on specific orders of the doctor to "get a strap" which, if believed by the jury, would support a finding that the orderly had done nothing more than obey the orders of the surgeon in charge. Since the triers of the facts resolved the evidence in favor of the two defendants, their verdicts will not be distributed on review.

Under the particular facts in the instant case, the jury was justified in determining that Dr. Beadles had entered the operating room and had assumed command and responsibility by giving direct orders concerning the placing of the patient in position on the operating table, even though he was not actually at the side of the patient at that moment ready to make the first incision. The jury was justified in finding that it was negligence on the part of the surgeon to order the attendant to do anything which might take him away from the physical person of the patient without first assuring that someone was at hand to attend and hold the patient.

The judgments were affirmed on the appeal.

(Beadles v. Metayka et al., 6 CCH Neg. Cases 2d 1407-Colo.)

Hospital and Surgical Nurse Liable for Clamp Left in Patient's Stomach

A scissors-shaped metal instrument about six inches long, called a Kelly clamp, was left in plaintiff's abdomen when an operation was performed on her at defendant hospital. The operation was commenced by Doctors Lacy and Slegal. Kay Pogatschnik, who was an employee of the hospital, acted as surgical nurse. Doctor Eiskamp assisted in a part of the operation at the request of Doctor Lacy. Plaintiff was unconscious during the entire operation, which lasted approximately five hours. She was in considerable pain during the ten days she remained in the hospital following the operation, and the pain persisted for several months after she returned home. X-ray pictures taken about six months after the operation revealed a clamp lodged in the upper right quadrant of her abdomen. The clamp was removed, and plaintiff brought this action to recover damages from the hospital, the doctors and the surgical nurse. At the close of plaintiff's case motions for nonsuit were granted as to Eiskamp, Pogatschnik and the hospital, and plaintiff has appealed from the ensuing judgment.

The case against Lacy and Siegel was settled after the nonsuits were granted as to the other defendants.

The questions presented are whether an inference of negligence was raised under the doctrine of *res ipsa loquitur* and whether, if such an in-

ference arose, it was dispelled as a matter of law.

The evidence as to Eiskamp's participation in the operation consisted of the testimony of Lacy, Slegal and Eiskamp, and it was clear and uncontradicted to the effect that Eiskamp was not responsible for leaving the clamp in plaintiff's abdomen. This testimony did not in any way tend to benefit Lacy or Slegal but, to the contrary, was disadvantageous to them because the exoneration of one defendant would have the necessary effect of increasing the possibility of liability on the part of each of the other defendants. The record indicates no rational ground for disbelieving their testimony; the inference raised against Eiskamp under the doctrine of *res ipsa loquitur* was dispelled as a matter of law.

The evidence, however, did not compel the conclusion that the inference of negligence on the part of the surgical nurse and the hospital had been dispelled. The testimony relied upon to absolve them was given by Craig, who was a hospital employee and who, in view of the advantages to her maintaining a favorable relationship with the hospital, obviously had an interest in the outcome of the case. She likewise had an interest in the litigation as to the nurse because the hospital, as employer, would be liable for acts of the nurse within the scope of her employment. Craig's testimony could therefore be disbelieved by the trier of fact.

"Moreover" said the court, "if Craig's testimony were accepted by the trier of fact as being true, it is not of the character required to dispel the inference of negligence raised against the hospital and the nurse. As we have seen, Craig testified that it was the practice of hospitals in the area to count sponges and needles as part of the operative procedure, and with respect to 'other implements' she stated there was 'no established practice of instrument counting either before or after surgery.' Even if we assume she intended to say that it was the practice not to count instruments, this evidence would not conclusively establish that the hospital and nurse were free from negligence. These defendants seek to avoid liability on the theory that they were required to exercise only that degree of skill employed by other hospitals and nurses in the community. It is a matter of common knowledge, however, that no special skill is required in counting instruments. Although under such circumstances proof of practice or custom is some evidence of what should be done and may assist in the determination of what constitutes due care, it does not conclusively establish the standard of care.

"We cannot say as a matter of law that there was no duty on the part of the hospital and nurses to keep an instrument count in order to assist the surgeon in determining whether all instruments used had been removed from the patient before final closure.

"The judgment is affirmed as to defendant Eiskamp and is reversed as to defendants Pogatschnik and Watsonville Community Hospital."

(Leonard v. Watsonville Community Hospital, 305 P. 2d 36-Cal.)

Abstracts

Bjork, Ake, Halldin, Matts and Wahlin, Ake. Enophthalmus elicited by succinylcholine. Some observations on the effect of succinylcholine and noradrenaline on the intraorbital muscles studied on man and experimental animals. Acta anaesth. Scandinav. 1: 41-53, 1957.

"In this paper attention will be drawn to a phenomenon that the authors have had ample opportunity of observing in connection with the administration of succinylcholine in anesthesia—namely, an enophthalmus with a rapid onset. In a majority of cases this is clearly visible and it does not appear to have been described hitherto. The terms exophthalmus and enophthalmus have been used in this paper as synonyms for protrusion and retraction, respectively, of the eyeball. The mechanism of these phenomena - and especially that of exophthalmus - has received close study by many workers but no definite explanation of it has been forthcoming. With the aid of succinylcholine and other drugs that act on the musculature it may be possible to create experimental conditions that will throw some light on this difficult subject. . .The studies were performed on patients prepared for general surgery or in connection with ophthalmic operations. . . .

"In connection with the first injection of succinylcholine in usual apnoic doses on man during anaesthesia we observed a retraction of the eyeball. This retraction was measured with a special apparatus affixed to the teeth and the measurements showed values to 3.25 mm. Experiments on the rat have also shown that succinylcholine causes a retraction of the eyeball and that noradrenaline, which is assumed to act on the smooth musculature of the orbit, gives rise to protrusion of the eyeball. From the experiments on the rat it appears that there is antagonism between the succinylcholine and the noradrenaline, the former almost completely eliminating the protrusion of the eyeball produced by the latter, whether the succinylcholine is administered before or after the noradrenaline. The same antagonism was found in respect of the nictitating membrane of the cat, which is a suitable organ for tests on the smooth musculature.

"In view of the electromyographic observations a contraction of the striated eye muscles is ruled out as an explanation of the retraction phenomenon. A contracture, however, may have occurred, although it seems not very probable. It appears from the animal experiments that succinylcholine has an obvious effect on the smooth musculature of the orbit and it may therefore be considered probable that this effect is of decisive importance in the occurrence of the observed retraction of the eyeball also in man."

Dhuner, K. G. and Nordqvist, P. Sleep reinduced by cortisone and glucose in patients intoxicated with barbiturates and related drugs. Acta anaesth. Scandinav. 1: 55-62, 1957.

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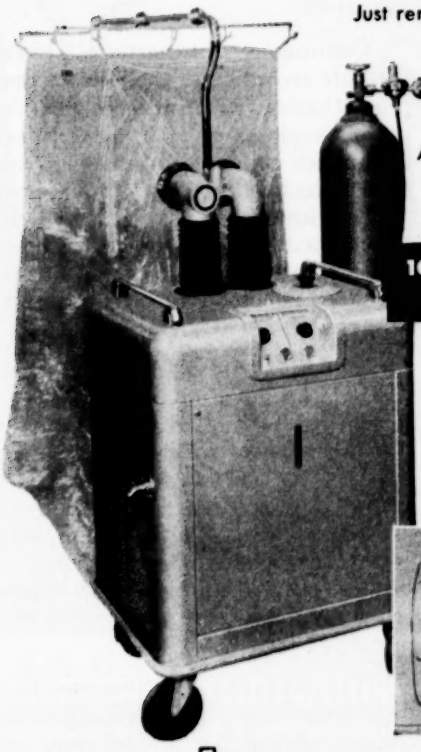

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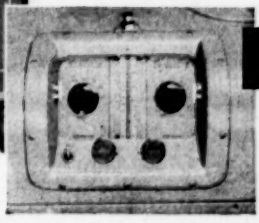

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found to increase the sensitivity of the brain to barbiturates. . .This study was made on patients who were brought to the hospital for acute drug poisoning, either accidental or suicidal. The severely poisoned cases are brought to the post-anaesthetic unit, where they remain until they regain consciousness. The treatment is chiefly in accord with that described by E. Nilsson....

"Twenty-one patients poisoned with barbiturates or promethazine have been investigated in order to see whether cortisone or glucose has any effect on the level of unconsciousness Such an effect was accidentally found in a patient who regained consciousness eighteen days after taking a barbiturate. After cortisone therapy, he became unconscious for an additional five days. Reinduction of sleep could be proved in eleven of thirteen cases by the clinical appearances; in four cases by EEG after intramuscular injection of 50-100 mg cortisone; and in six of seven cases after the intravenous injection of 9-12 mg glucose, three of whom were controlled by EEG."

Millar, R. A. Promethazine and the circulatory response to tilting. Canad. Anaesthetists' Soc. J. 4: 364-371 (Oct.) 1957.

"In this investigation an attempt has been made to assess the action of intravenous promethazine on blood pressure, by continuous intra-arterial recording, and to observe the response to the circulatory stress of maintaining a 60-degree head-up tilt for fifteen minutes before and after administration of the drug. Some inferences have also been drawn in regard to the use of intravenous promethazine in clinical anesthesia....

"Eighteen studies were carried out on seventeen unpremedicated male subjects between the ages of 17 and 60 years, who had undergone or were awaiting a wide variety of surgical procedures. The only criteria involved in selection of individual subjects were their ability to lie comfortably in the supine position, and their availability....

"Continuous intra-arterial blood pressure recording . . . has shown that promethazine, when injected intravenously in doses of 50-100 mg., does not induce circulatory depression, although tachycardia may occur especially with rapid injection. A tendency for blood pressure to increase appears to be at least partly attributable to the moderate or severe restlessness which frequently occurs....

"Induction of a 60-degree head-up tilt before and after intravenous injection of promethazine revealed a somewhat lower incidence of severe hypotension after injection than before. It appears that intravenous promethazine has little depressant action on the circulatory response to head-up tilting and does not share the postural hypotensive properties of chlorpromazine.

"It is concluded that, if restlessness is to be avoided, intravenous promethazine should be administered to conscious patients only in conjunction with an analgesic drug. Severe and uncontrollable restlessness may occur following intravenous injection of 50-100 mg. in patients who are required to remain immobile or who are experiencing even minor degrees of discomfort."

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Book Reviews

Muscle Relaxants In Anesthesiology. By Francis F. Foldes, M.D., Director, Department of Anesthesia, Mercy Hospital; Associate Professor of Anesthesiology, University of Pittsburgh, School of Medicine, Pittsburgh, Pennsylvania. Springfield, Illinois: Charles C. Thomas. Cloth. 210 pages. 1957.

Dr. Foldes has presented in this monograph a practical guide in the use of muscle relaxants. Emphasis has been placed on practical considerations necessary for the safe and efficient administration of muscle relaxants. The author has included the chemical, physiological and pharmacological aspects of the use of muscle relaxants for the understanding of the principles of their clinical application. The first part of the book is devoted to basic considerations; the second part—to clinical use. A special feature is a four page glossary in which certain terms are briefly explained.

This monograph is another in the American Lecture Series and will be particularly useful for all anesthetists. Bibliographic references follow the text. Indexed.

Anesthesia. A Manual For Students & Physicians. By Stuart C. Cullen, M.D.; Chairman, Division of Anesthesiology, Department of Surgery, State University of Iowa Hospitals; Professor of Surgery (Anesthesiology), State University of Iowa College of Medicine. Cloth. 295 pages. Chicago: Year Book Publishers. 5th ed. 1957.

The fifth edition of this text is of a fundamental nature and is directed at assisting the student and physician in acquiring a basic approach to the solutions of problems of anesthesia.

The chapter on the Use of Depressant Drugs has been entirely revised to change the emphasis from a consideration of drugs to a consideration of the patient and his needs.

This book will be a useful manual to the student, anesthetist and others who may be called upon to employ depressant drugs, alleviate respiratory depression or obstruction and treat hypoxia or shock.

References follow each chapter. Indexed.

DeLees Obstetrics For Nurses. By M. Edward Davis, M.D.; Joseph Bolivar DeLee Professor and Chairman of the Department of Obstetrics and Gynecology, University of Chicago; Obstetrician in Chief of the Chicago Lying-in Hospital and Dispensary, and Catherine E. Sheckler, R.N., M.A.; Associate Director Nursing Service, Michael Reese Hospital, Chicago, Illinois, and Director American Committee on Maternal Welfare. Cloth. 625 pages, 399 figures. Philadelphia: W. B. Saunders Company. 16th ed. 1957.

The sixteenth edition of this classic progresses toward the recognition of the indivisibility of the functions of mind, body and emotions during pregnancy. In this latest edition, the authors place emphasis on the psychological aspects of pregnancy.

The text is divided into four units. The first deals with the physiology of reproduction and pregnancy. The second encompasses normal preg-

nancy, labor, the puerperium and the care of the normal newborn. The third includes complications of all phases of the maternity cycle and the fourth deals with the problems of the newborn period. References follow each unit.

The present authors have added contributions of the professions which participate in the services of obstetrics.

A chapter devoted to Analgesia and Anesthesia in Labor and Delivery will be of great interest to the anesthetist.

The text will be extremely useful to the nurse who wishes to keep abreast of the current practices in the art of obstetrics.

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Anesthetist needed spring 1958. 400 bed modern hospital. Active surgical and obstetrical services. New surgery under construction. Salary dependent on training and experience. Social Security, low cost life insurance. Annual vacation and sick leave after 1 year. Medical anesthesiologist in charge. Contact Director of Anesthesia, Methodist Hospital, Peoria, Ill.

NURSE ANESTHETIST: Excellent working conditions in modern 225 bed hospital. Full staff six anesthetists; only seven calls in six weeks. Beginning wage—$435. month. For details write: Robert L. Seifert, Personnel, Mercy Hospital, Johnstown, Pennsylvania.

This 185 bed general, non-profit, nonsectarian community hospital fully accredited by the Joint Commission on Accreditation and approved for internships by the American Medical Association, needs a nurse anesthetist. The total annual pay exceeds $6,000. per year. The staff of anesthetists consists of three nurse anesthetists fully qualified and are required to be either members of the A.A.N.A. or eligible. The department is well equipped, and Heidbrink anesthesia machines are in use. Call is taken every third night and every third weekend, and additional payment is paid for each major case. Three weeks paid vacation, plus six paid holidays, plus sick time allowances are offered. The hospital is located in a resort city of 50,000 on Lake Michigan. Apply to Administrator Mr. C. T. Loftus, Mercy Hospital, Benton Harbor, Michigan.

NURSE ANESTHETIST: For fully accredited hospital—air conditioned—modern — good hours — social security — meals — vacation — holidays — sick leave. For further information, call or write Robert M. Murphy, Administrator, Floyd Hospital, Rome, Georgia.

Nurse Anesthetist, 500 bed hospital. Anesthesia Department consists of one M.D. and nine nurses. Positions open for two additional anesthetists. Write to Director of Anesthesia, Harrisburg Polyclinic Hospital, Harrisburg, Pa.

NURSE ANESTHETIST: New 142-bed, Air-Conditioned, approved general hospital, College Town—30,000 near Nashville. Pleasant work situation, employee benefits. Guaranteed minimum $400 per month, fees for service. Administrator, Memorial Hospital, Clarksville, Tennessee.

Vacation relief anesthetist. Four to eight weeks, early 1958. Must be dependable and competent for independent work. Will arrange quarters. Salary will be adequate. Administrator, Jackson County Public Hospital, Maquoketa, Iowa.

NURSE ANESTHETIST for 236-bed general hospital, 30 miles from New York City. Write stating age, training and experience. Morristown Memorial Hospital, Morristown, New Jersey.

Anesthetist Wanted by Fully Accredited Rural Hospital; Southwest; F.A.C.S. Surgeon; Ideal location for nurse who likes small towns. General surgery, and OB, rare emergency calls; Salary open; write or wire Box B 12, Journal American Association of Nurse Anesthetists, Prudential Plaza, Suite 3010, Chicago, Ill.

NURSE ANESTHETIST: Join Anesthesiologist and Registered Nurse Anesthetist, March 1, 1958. Salary from $400 depending upon background. Active 100-bed community hospital at county seat in beautiful Kittatinny Mts. Yet 1½ hrs. N.Y.C. Contact David H. Welsh, M.D., Chief of Anesthesia, Newton Memorial Hospital, Newton, N. J.

Nurse Anesthetists — For approved general hospital. Must be able to administer latest types anesthetic agents. Salary $400 to $425 per month plus full maintenance. Annual vacation and sick leave. Retirement benefits if desired. Apply Superintendent, Robinson Memorial Hospital, Ravenna, Ohio.

WANTED: NURSE ANESTHETIST for 200-bed Hospital. Staffed with 5 Nurse Anesthetists. Contact: T. W. Patterson, Administrator, Herbert J. Thomas Memorial Hospital, South Charleston 3, West Virginia.

Nurse Anesthetist, 182 bed General Hospital. Four anesthetists on staff. Civil Service - Salary $487. Write Superintendent, Puumaile and Hilo Memorial Hospital, Hilo, Hawaii.

REGISTERED NURSE ANESTHETIST: New 100 bed hospital, excellent medical staff F.A.C.S. qualified surgeons, university town. $600.00 per month, liberal benefits. Apply Earl Dresser, McDonough District Hospital, Macomb, Illinois.

Registered AANA Nurse Anesthetist for 30-bed, general hospital. Liberal personnel policies. Adequate arrangements for relief on weekends, vacations, etc. Salary $525 per month. For further information contact, Henry A. Kallio, Administrator, St. John's Lutheran Hospital, Libby, Montana.

Registered Nurse Anesthetist: Large University Hospital using both anesthesiologists and nurse anesthetists. Wide variety surgical and anesthetic practice. Salary according to experience but counting call bonuses, new graduates average $420.00 per month. Uniforms and laundry furnished. Apply to Mrs. Helen M. Geiss, Chief Nurse Anesthetist, Strong Memorial Hospital, Rochester 20, New York.

WANTED: Registered Nurse Anesthetist. Write or call St. Catherine's Hospital, Omaha, Nebraska for details. Jackson 6477.

Desirable anesthetist position to be available January 1, 1958. For information contact administrator, Baptist Hospital, Pensacola, Florida.

Nurse Anesthetists (2) to work in Dept. of Anesthesia, Saint Mary's Hospital, Cairo, Ill., under supervision of anesthesiologist. Salary commensurate with ability. Paid vacation. Give full particulars in reply. Write Dr. O. A. Zeller, Jr., Box 444, Union City, Tenn.

NURSE ANESTHETIST for municipal hospital expanding to 200 beds; 4 major operating rooms, 1 minor operating room and cystoscopy room; salary open. Contact: John M. Alexon, Administrator, Virginia Municipal Hospital, Virginia, Minnesota.

WANTED. Two nurse anesthetists. 300 bed hospital. $460. per month and full maintenance. Department directed by anesthesiologist. Emergency call alternated every fifth day. Apply St. Francis Hospital, Monroe, La.

Wanted Registered Nurse Anesthetist for 25 bed Hospital. General Surgery. Salary $450.00 monthly. 30 miles east of Los Angeles. Apply Box B-17, Journal American Association of Nurse Anesthetists, Prudential Plaza, Suite 3010, Chicago 1, Ill.

NURSE ANESTHETIST — Registered AANA. 200 bed general hospital, air-conditioned OR and OB Suites. Modern apartment-style living quarters, full maintenance, even rotation of call. Apply: Chief Nurse Anesthetist, Therese C. Trupp, Princeton Hospital, Princeton, New Jersey.

Nurse Anesthetist: 85 bed fully accredited general hospital on southeastern coast. Starting salary $400.00 per month plus meals and room. Two weeks vacation per year. On call every other day, every other weekend off. Liberal sick leave and six holidays per year. Social Security and hospitalization provided. Apply Box B 14 Journal American Association of Nurse Anesthetists, Prudential Plaza, Suite 3010, Chicago 1, Ill.

CALIFORNIA STATE HOSPITALS need Nurse-Anesthetists in several locations. Monthly salary range is $458 to $556. Requires professional experience or graduation from a school of anesthesia approved by the AANA, and eligibility for California Nurses license. Attractive employee benefits. Write Medical Recruitment Unit, State Personnel Board, 801 Capitol Ave., Sacramento, Calif.

The **Journal**
OF THE
AMERICAN ASSOCIATION
OF NURSE ANESTHETISTS

CONTRIBUTIONS to the JOURNAL should be typewritten, double-spaced, on one side of white typewriter paper. The author's name and hospital or university affiliations should be typed on the first page.

Illustrations submitted with an article should be glossy prints. Each illustration should carry a number and the author's name on the back. Legends for illustrations should be typed on a separate page at the end of the manuscript.

References should be complete and should also be typed on a separate page. Superior figures should be used to indicate the placement of the references in the text.

Manuscripts should be sent to the Editor, Journal American Association of Nurse Anesthetists, 3010 Prudential Plaza, Chicago 1, Ill.

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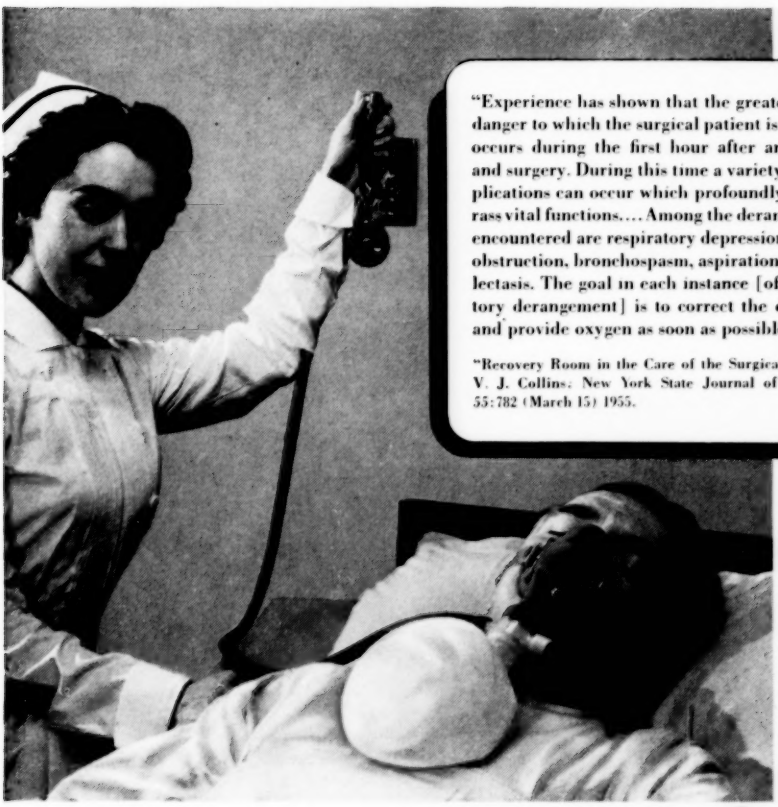
The **TWENTY-SEVENTH QUALIFYING EXAMINATION** for membership in the American Association of Nurse Anesthetists will be conducted on May 10, 1958. The deadline for accepting completed applications including the transcripts is April 7. Notice of eligibility will be mailed about April 14.

Applications should be forwarded early enough to allow time to request transcripts and have them returned to the Executive Office before the deadline date.

The **TWENTY-EIGHTH QAULIFYING EXAMINATION** for membership in the American Association of Nurse Anesthetists will be conducted on November 8, 1958. The deadline for accepting completed applications including the transcripts is October 1. Notice of eligibility will be mailed about October 8.

Applications should be forwarded early enough to allow time to request transcripts and have them returned to the Executive Office before the deadline date.

During postoperative recovery O_2



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"Recovery Room in the Care of the Surgical Patient," V. J. Collins: New York State Journal of Medicine 55:782 (March 15) 1955.

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